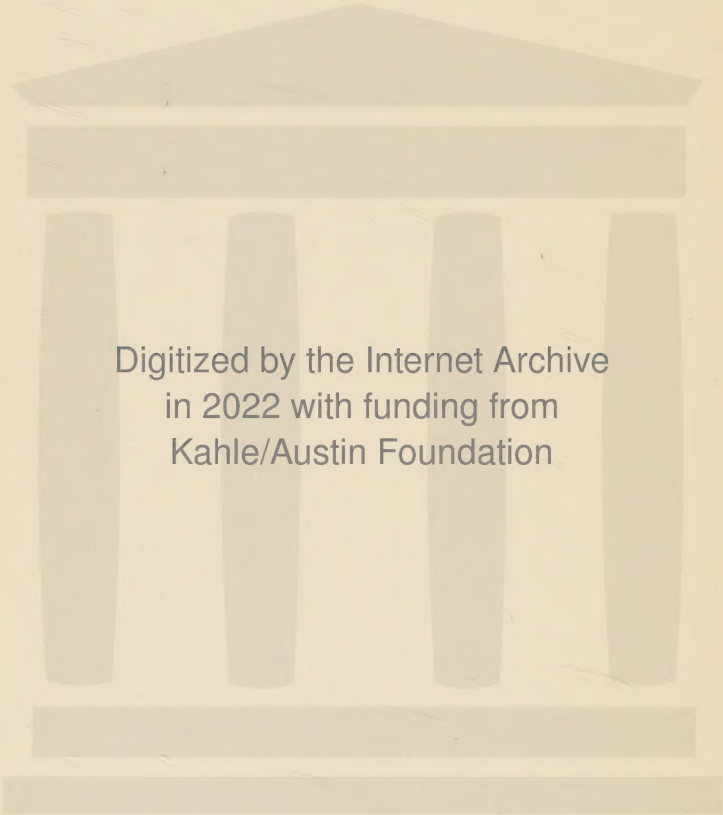
Charles W. Eliot

CHARLES WILLIAM ELIOT

In Two Volumes

VOLUME I



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Charles W. Eliot

CHARLES W. ELIOT

President of Harvard University
1869–1909

By
HENRY JAMES

VOLUME ONE

Illustrated

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Man is born to be a citizen, said Aristotle.

I think I see place and duties for a nobleman in every society; but it is not to drink wine and ride in a fine coach, but to guide and adorn life for the multitude by forethought, by elegant studies, by perseverance, self-devotion, and the remembrance of the humble old friend — by making his life secretly beautiful. EMERSON.

They helped every one his neighbour; and every one said to his brother, Be of good courage. ISAIAH.

The presence of highly cultivated and vigorous minds is the most powerful aid to popular education. A class of strong thinkers is the palladium of democracy. They are the natural enemies of ostentation and aggressive wealth. The vastest aggregate of average intelligence cannot supply their place. FRANCIS PARKMAN.

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PREFATORY NOTES

It is now nearly a century since the late Charles W. Eliot, President of Harvard College from 1869 to 1909, was born. George Washington, Adam Smith, or Lord Mansfield would have felt more at home in the Boston where his childhood was spent than Chief Justice Marshall, who died in 1835, would feel himself in any American city to-day. During the last marvelous eighty years the American educational system has been striving to keep up with the changing times and to readapt itself to their demands. Its efforts have sometimes been hurried, sometimes reluctant or reactionary, often perplexed. Its reformers have been numerous. But, in the field of higher education at any rate, Eliot stood head and shoulders above his contemporaries for forty years. Furthermore, there was no other among them whose contribution was more personal in the sense of being more expressive of his individual mind and temperament. He was one of the men with whom the student of American history in the nineteenth century will have to reckon.

The purpose of this book is to delineate his character, not to hallow his memory or to chronicle all his achievements. For I agree with those who hold that Biography's primary concern is with character and personality. When a man's achievements or failures have gone to the making of history as did Eliot's, he invites our scrutiny

for several reasons, and one is that all he did was a compound resultant of circumstances and the man himself. Only when one knows what were his peculiar endowment, temper, and limitations can his conduct be comprehended. Only then does it become safe for the historian to use him as a symbol, test, or measure of the age. Then, too, as Mr. Strachey has well said, "human beings have a value which is independent of any temporal process — which is eternal and must be felt for its own sake." This book accordingly attempts to paint a portrait of Charles William Eliot with that minimum of background which is necessary to give solidity and meaning to his figure. Incidents and areas of background are not elaborated except as they hold a mirror to the man. I hope that others, who, being primarily concerned with the history of institutions and ideas, come upon the deeply carved traces of his activity and find themselves curious to know what he was like, may find here something that will help them to understand him.

If some readers among them wish to know more about Eliot's pronouncements upon this or that — and it is to be hoped that some will feel the desire — they will find hints to guide them in the bibliographical appendices. Professor Neilson's two volumes of Eliot's essays and addresses, selected with his aid and approval, are synoptic and convenient. They include nothing written after 1915; but from then until 1924 they are supplemented by Mr. M. A. deW. Howe's similar collection called "A Late Harvest." In this biography Neilson's "Charles W.

Eliot, the Man and his Beliefs," is usually cited as "Neilson." Eliot's own publications are usually cited by title only. His Annual Reports as President of Harvard are cited simply as "Ann. Rep.," followed by the year. Where I have quoted from something that has been published, I have referred to the source in a footnote. But I have usually omitted references to manuscripts. Most of the manuscript material concerning Eliot is now lodged in the Harvard College Library, and I propose to deposit there a copy of this book with extra annotations to guide anybody who wishes to examine the sources from which I have drawn. He must go there anyway if he would examine unpublished sources.

In view of the number of biographies that are paid for anonymously by persons who have a sentimental interest in their heroes I think it fair to this book, to the reader, to the Eliot family and to myself, to say that my only pecuniary reward comes from the public through the publisher. Dr. Samuel A. Eliot agreed at the outset that all papers should be placed at my disposal with permission to quote and comment according to my own discretion. He and other members of the Eliot family have given me every possible assistance, without ever trying to influence my judgment. If I have overestimated the merits of the hero of this study, or if I have misapprehended him in any other respect, the mistake is therefore my own.

I owe hearty thanks to certain persons who have done

me the favor to read different parts of the book in manuscript, and to give me the benefit of their comments and suggestions. Among them, I am particularly sensible of the kindness of Professor C. H. Haskins, Mr. J. D. Greene, Dr. H. P. Walcott, Professor F. G. Peabody, Professor Ephraim Emerton, Professor R. B. Perry, Professor A. O. Norton, Mr. M. A. deW. Howe, President W. A. Neilson, Mr. William James, and last but not least, Dr. Samuel A. Eliot, Mrs. Charles Eliot, Mrs. Grace Eliot Dudley, Mrs. Ruth Eliot Peirce.

Many people have generously supplied me with material or information — so many that it is impossible to thank them all by name. The text will show who some of them are, but to others, who have sent me letters that I have not quoted or have told me about incidents that have not found their way into the book, I feel equally grateful. What they have shown me or told me has been instructive and has saved me from some mistakes.

Harvard College has kindly granted me unrestricted access to its records, and the College Library generously lent me one of its study rooms and provided facilities without which it would have been impossible to do what had to be done. In the beginning Mrs. Grace Eliot Dudley assembled old family papers upon which Chapter I is largely based and then, with the assistance of Miss R. J. Borthwick, sifted and sorted a vast accumulation of correspondence and documents. Doing these things most skillfully, she helped me very much, and it

is a pleasure to acknowledge a special debt to her. I am also glad of this opportunity to thank Mrs. C. A. Randau for the patience and care with which, as secretary, she has done her part.

For the bibliography, Appendix J, I am indebted to Mrs. B. J. Whiting and Mr. W. F. Walbridge. The topical index has been prepared by Mr. John H. Walden.

H. J.

July 31, 1930

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CHRONOLOGY AND FAMILY NAMES

1834	March 20. C. W. E. was born in Boston.
1849	Passed from the Boston Latin School into Harvard College.
1853	Graduated, third scholar of the class.
1854	Appointed tutor in Mathematics, Harvard College.
1857	The family fortune was wiped out.
1858	October 27. Married Ellen Derby Peabody.
1858	Made Assistant Professor of Mathematics and Chemistry.
1861	Placed in charge of the Chemical Laboratory of the Lawrence Scientific School.
1863	C. W. E. left Harvard.
1863–1865	Two years were spent in Europe.
1865	September. Returned to Boston to become Professor of Chemistry in the Massachusetts Institute of Technology.
1867–1868	Another winter spent in Europe.
1869	March 12. Elected President of Harvard College by the Corporation.
	March 13. Ellen Peabody Eliot died.
	October 19. Inaugurated as President of Harvard.
1871	Bought a cruising yacht and began spending his summers on the coast of Maine.
1877	October 30. Married Grace Mellen Hopkinson.
1881	Built a summer cottage at Northeast Harbor.
1908	October 26. Sent in his resignation as President of Harvard.
1909	May 19. His resignation took effect.
1911–1912	Travelled around the world as an emissary of the Carnegie Endowment for International Peace.
1924	August 16. Grace Hopkinson Eliot died.
1926	August 22. C. W. E. died at Northeast Harbor.

(See Appendix J for a list of Eliot's more important addresses and publications with their dates; and Appendix G for dates when certain honors were conferred upon him.)

Charles William Eliot's parents were Samuel Atkins Eliot (1798–1862) and Mary Lyman (1802–1875), who were married June 13, 1826. This book contains occasional allusions to uncles and aunts. Those who were alive during C. W. E.'s youth were:

Mary Harrison Eliot (1788–1846); married Edmund Dwight.
Elizabeth Eliot (1790–1874); married Benjamin Guild.
Catherine Eliot (1793–1879); married Andrews Norton.
Anna Eliot (1800–1885); married George Ticknor.
George W. Lyman (died 1880).
Charles Lyman (died 1881).
Theodore Lyman (1792–1849).

The last named was the father of the Theodore Lyman of numerous letters in the text.

William Havard Eliot, an uncle who died before C. W. E. was born, was the father of the Samuel Eliot who is mentioned on page 228.

C. W. E. was the third of five children who survived babyhood, and the only son. His sisters were:

Mary Lyman Eliot (1827–1924); married Charles Eliot Guild in 1854.
Elizabeth Lyman Eliot (1831–1895); married Stephen H. Bullard in 1859.
Catherine Atkins Eliot (1836–1882); married Francis H. Storer in 1871.
Frances Anne Eliot (1838–1897); married Henry Wilder Foote in 1863.

Four children were born of C. W. E.'s first marriage:

Charles (Nov. 1, 1859–March 25, 1897).
Francis (May 18, 1861–October 9, 1861).
Samuel Atkins (August 24, 1862).
Robert (July 8, 1866–December 14, 1867).

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CHARLES WILLIAM ELIOT

CHARLES WILLIAM ELIOT

CHAPTER I

New England forbears — Samuel Eliot and Theodore Lyman — Birth, childhood, and early schooling of Charles William — His parents — Nahant and Boston

Charles W. Eliot was a great believer in "stocks," and thought that families whose men and women he had known and watched through four generations supplied him with confirmation of his faith. He described his own ancestry as "a line of Boston Eliots who for several generations had been serviceable and influential people, and on the maternal side, a line of Lymans who in three successive generations . . . had been useful and successful in life." It satisfied him to consider them thus, collectively and unnamed save as Eliots and Lymans. He would readily have acknowledged that he was indebted to them for certain physical blessings, and might have done so in words such as those in which he remarked of James Walker that, "like most men of mark, he had an admirable body, tough, healthy, serviceable." Of his cultural endowment — as distinguished from his bodily inheritance — he would have said that his parents "were carefully educated persons; and among his progenitors were several men who had been rich in their generation, able to support considerable establishments, and to give their

children every accessible advantage." These were, in fact, the brief words in which he characterized the family background when he wrote the life of his son, Charles.

Yet Eliot could and did look back to his forbears with satisfaction, and would have been warranted in speaking of them with more particularity.

The original American Eliot, Andrew by name, came from East Coker in Somersetshire about 1669 and was admitted to the First Church of Beverly, Massachusetts, in 1670. In his will he referred to himself as a cordwainer — a shoemaker and worker in leather. He served his fellow townsmen as representative in the General Court for five years. In 1690 he was elected as the first town clerk of Beverly and he kept the town records for a number of years. He was one of the jurors in the witch trials of 1692, and subsequently he signed the public confession of error and delusion with other jurors. But it would be idle to dwell on him as an ancestor, after identifying him as the one who brought the family name to Massachusetts and first won local regard for it, for in that generation of Charles W. Eliot's forbears he was only one among a probable sixty-four. No connection has been traced between him and John Eliot, the famous Apostle to the Indians.

From Andrew's generation through the next four, numerous family lines converged upon Charles W. Eliot's four grandparents. Concerning what the men and women who contributed to the stock in these earlier generations were individually and inwardly, it would now be

SAMUEL ELIOT
By Gilbert Stuart

difficult to say more than a very little with confidence. Outwardly, they and their brothers and sisters resembled hundreds of other New-Englanders who, in diverse stations and among meagre opportunities, worked hard and lived honorably. Most of the men were craftsmen, little tradesmen, farmers, sailors. Some were parish officers. A few were ministers. Some were volunteers in the local military companies or holders of town offices. A very small number held conspicuous posts. The women bore many children, buried not a few, and brought up the survivors in the fear of God according to the Puritan theology. The family names were Shattack, Marshall, Andrews, Symonds, Atkins, Dudley, Kent, Pickering, Williams, Plumb, Sheldon, Plummer, as well as Eliot and Lyman and a few others not identified — names that can be traced back to the small squires, artisans, and yeomen of seventeenth-century England. Most of them lived in Salem, Beverly, Newburyport, Gloucester, Boxford, Northampton, York, and Kennebunk, Hartford, Connecticut, or Boston.[1] None of these ancestors seem to have been good-for-nothings. Very few of them were the office-holders and Congregational ministers who constituted the colonial upper class, but they all appear to have been people who, however modestly circumstanced, held up their heads and commanded the "consideration" of their neighbors. In short, they were a good "stock," and their descendants — wearing a score and more of names other

[1] Genealogical information will be found in *The Eliot Family*, by Walter Graeme Eliot, New York, 1887; and *New England Historical and Genealogical Register*, LXXXI, 1; and correction in *ibid.*, LXXXII, 354, footnote.

than Eliot and Lyman — have proved it in too many ways and places for enumeration here.

As the stock emerged from the colonial period, it rose to social consequence in the persons of Charles W. Eliot's two grandfathers — Samuel Eliot and Theodore Lyman. The family environment of the boy's youth was largely of their making, and each of them deserves a glance.

Samuel Eliot, the founder of the family fortune, born in 1739, was the son of a Boston bookseller of the same name and a nephew of the Reverend Andrew Eliot, who was a Fellow of Harvard College from 1765 to 1778, and who was elected President of the College in 1774, but declined to leave his parish for the post in Cambridge. When Samuel was six years old, his father died, aged thirty-two, and left him and his young mother and three sisters with almost nothing. For a number of years poverty and privation were the lot of the little family; but the mother, of whose origin nothing is known except that her maiden name was Elizabeth Marshall and that she came from the West Indies, was a woman of unusual fortitude and wisdom who managed somehow to bring up and educate all the children. One of the girls married Jeremy Belknap, the historian and minister of the Federal Street Church. Little Samuel was sent to the Boston Latin School, and was then apprenticed to the, for those days, large mercantile house of Jonathan and John Amory. Before he was thirty, he had taken over the retail branch of its business on his own account.

The days had come when there were opportunities for a few men in the Colonies to amass fortunes in trade, and Samuel Eliot waxed constantly in riches and influence. He made journeys to England in the interest of business both before and after the Revolution, and his letters give the impression that he must have been an unusually attractive person, sociable, overflowing with frank talk and happy spirits, responsive to every sort of experience and especially to intercourse with interesting people. He married twice, the second time, in 1786, with Miss Catherine Atkins, the great-granddaughter of Governor Joseph Dudley. At about the same time he bought and moved into Mr. Amory's large house on the corner of Beacon and Tremont Streets, opposite King's Chapel. There was then a garden with peach trees in it behind the Amory house, but Eliot also bought a piece of land where the Tremont Building now stands — across Beacon Street from his "mansion" — and turned it into as beautiful a garden as he and his wife could make of it.

His benefactions were considerable, sometimes impulsive — as when he paid out everybody who was being held in the Debtors' Prison; and sometimes more far-seeing — as when he gave twenty thousand dollars to Harvard College to establish a Greek professorship. Both the delivery of the debtors and the endowment of the professorship were accomplished anonymously, and as Samuel Eliot liked to conceal his charities, it may be assumed that they were more numerous than they are known to have been.

It became his practice to give annual dinners, in the best style then possible, first to the Governor and Lieutenant-Governor of the year, and then to the Justices of the Supreme Court and leading members of the Bar.[1] In all ways he seems to have lived handsomely. As was fitting, he commissioned Stuart to paint his portrait and his wife's. Had he done nothing else in life, Stuart's canvases would have sufficed to ensure the handsome couple against oblivion.

They brought up eight children under their roof — one daughter by Samuel's first marriage, and four daughters and three sons of their own. One son, Charles, a young man of great promise and endearing qualities, died just after graduating from the Divinity School. The other children of the second marriage survived their father's death in 1820. When Samuel Eliot's will was opened, it was discovered to be a long and colorful document containing passages which were obviously not the work of his lawyer. One of these was an affecting eulogy of his friend John Lowell, whom he nominated to be his executor. His estate was appraised at nearly $1,200,000 and was probably the largest fortune in Boston at that time. Thus he left his widow and all his children rich according to the standards of those days. "One generation passeth away, and another generation cometh. The smell of Parma violets, the sight of a quaint old morocco work-box, bring back the image of a lovely old lady dressed in black with a widow's cap, knitting in an arm-chair in a sunny

[1] Anna Ticknor, *Samuel Eliot* (Boston, 1869), 124.

CATHERINE ATKINS ELIOT
By Gilbert Stuart

parlor. . . . The lady was Catherine Atkins, widow of Samuel Eliot. . . . I have known all the sons and daughters of this house, and a more friendly, loyal, conscientious set of men and women, anxious to fulfill their duties to God and to their neighbor, never lived in their generation."[1] Thus on a certain memorial occasion the late Henry Lee spoke of the Eliots of the generation which preceded that of Charles William.

Theodore Lyman — to turn now to the maternal grandfather — was equally a master of opportunity, but with differences. He was the son of Isaac Lyman, for sixty years a minister in York, Maine; was born in 1755; was a conspicuously handsome person from childhood until death. In 1786 he married as his second wife Lydia, the daughter of George Williams of Salem, a niece of Colonel Timothy Pickering of Washington's and Adams's cabinets. One of their children, Mary Lyman, became the mother of Charles W. Eliot. Soon after this marriage he moved to Boston, went into the Northwest fur trade and the East India trade, and grew rich. Later, he ventured money in the new textile companies that were building mills along the New England rivers, and was treasurer of several. He was much respected for his qualities of character and mind. He was ambitious to live like a gentleman in a generous way, and he loved, at any rate while his wife lived, to invite distinguished people to his table. In

[1] "Mrs. George Ticknor" (Anna Eliot), reprinted in John T. Morse, Jr.'s, *Memoir of Henry Lee* (Boston, 1905).

winter he occupied a large house in town, and in summer lived in Waltham.

His place in Waltham was considered the finest near Boston in his time, and, proving, as it beautifully has throughout more than a century, that when Nature has been wisely helped "she will make for us scenery which shall grow to more and more loveliness and character as the years pass," it still keeps his memory green. He built the mansion house, changed roads, laid out a long avenue, set out box hedges, dammed the brook so that its surface reflected more sky, and erected greenhouses. The Waltham place shows that he knew how to apply what could be learned from Repton's and Whately's books on landscape architecture with taste and a true eye for effect. He filled the greenhouses with foreign plants, including pineapples, and imported cattle and trees from England. "He kept a carriage for his wife, not very common then," wrote Mrs. S. P. Sears, "and his daughter Mary rode horseback, and I have heard Mr. William Amory tell how the Cambridge fellows would stand and look at the beautiful young lady on her horse."

Thus, more than thirty years before the hero of this biography came into the world, both sides of his family had become honorably and luxuriously established in Boston and Waltham.

Samuel Atkins Eliot, son of Samuel and father of Charles William, was born in 1798, grew up in the big house opposite King's Chapel, and entered Harvard with

the Class of 1817. His father wanted him to be a minister, and, being young and of a dutiful disposition he entered the Harvard Divinity School and went through the course. But his father died in the year of his graduation and Samuel Atkins stopped short of taking a pulpit. Instead he went to Europe for two years of travel and study during which "he acquired much knowledge of music, skill in singing, and a great interest in gardens, parks, and playgrounds." [1] His letters home were those of an intelligent and conscientious young man who was eager to improve himself, but who seemed to be incapable of finding excitement, fun, or congenial society in foreign lands. It must have been with a sigh of relief that he returned to Boston, and he never went abroad again. Shortly he married Mary Lyman (1826), and shortly again (1829–30) he built and moved into a house at the top of Beacon Street. This house was number 31 and stood in what is now the western edge of the State House lawn adjoining the present Unitarian Association building. It faced southward across the Common and its eastern windows looked out upon the garden of the old John Hancock house. Detailed accounts of what it cost to build and of what was spent on its furnishings, hangings, china, and silver — all of them in good part imported from England — are still extant as evidence both of what was thought to belong in a well-to-do Boston house a century ago, and of the strict account-keeping habits that were inculcated into New-Englanders of his time and station. Presumably

[1] C. W. E. to P. L. Atherton, April 16, 1925.

old Theodore Lyman approved the accounts, for he paid all the bills as a present to the young couple. In that house, looking out pleasantly over the Common, they lived while their children grew up. Close by were other members of the numerous family connection — notably three Lyman households near the top of Mount Vernon Street on the one hand, and on the other the houses of the Eliot sisters, Mrs. Benjamin Guild a few doors to the east on Beacon Street and Mrs. George Ticknor and Mrs. Edmund Dwight on Park Street.

Charles William, the third of five children who survived early infancy and the only son,[1] was born in the Beacon Street house on the 20th of March, 1834. He was named after his two Eliot uncles — Charles, whose early death has already been mentioned, and William (Havard), who had died in 1831 and whose good works the boy's father was endeavoring to continue in several directions.

A boy had been hoped for and this was a sturdy little fellow. But his entrance upon the scene brought a shock to a family which was justified in expecting its men and women to be good-looking. The new child carried an ugly and unconcealable birth-mark, a swollen, liver-colored welt that occupied most of the right side of his face down to his mouth. It was impossible to overlook the nevus, or to see it and forget it. It would be as wrong to refrain from speaking of it in his biography as it would be absurd to describe Julius Cæsar without alluding to his baldness, or to write the story of Frederick the Great

[1] One girl died before he was born.

VIEW OF BEACON STREET SHOWING BIRTHPLACE OF CHARLES W. ELIOT

The Eliot house is in the center just beyond the Hancock house and garden

and ignore his crooked spine. Indeed the boy's facial deformity was the one unusual peculiarity that was to matter much to him in his childhood.[1]

His mother understood its significance from the beginning. She could not lean over the helpless baby, wondering what he might come to in the world, without gazing at the scar on his face and reflecting that she must school herself not to notice it. It would make him the butt of the gibes of other children; it would tend to isolate him, and so might easily turn his thoughts in upon himself; almost of necessity it would make him reserved, and it might perhaps cause him to be fearful among his fellows. In short, it was a cross which he must carry to his grave, and which she must teach him early to bear manfully. Fortunately, she was a person for whom it was natural to take things in a matter-of-fact sort of way.

Before long the boy himself was made aware of his misfortune. He must have become conscious that people

[1] Dr. Francis G. Peabody, Eliot's brother-in-law, tells me that the only occasion upon which Eliot alluded to his birth-mark in his presence was once when he was explaining that he had met certain financial demands by using a special legacy (or gift) that his grandfather Lyman had given him. "Why did he leave you a *special* legacy?" asked Dr. Peabody. "Because of this," replied Eliot, pointing to the right side of his face. Dr. Peabody was surprised and much impressed. — There is some confusion in this, for old Theodore Lyman, who died when C. W. Eliot was but five, left a legacy of twenty thousand dollars to each of his *three* grandsons. He may perhaps have made a gift without putting it in his will. The important point, however, is that C. W. Eliot thought that he had appeared to be a seriously handicapped child, and believed that his grandfather was moved by his misfortune to make a provision that he would not have made otherwise. *That*, I am confident, is to be deduced from the story — whatever the form of the provision may have been.

looked twice at him who need have looked but once, and must have caught other children staring. The Boston Common, across the street from his father's house, was a play field for all the youngsters of the town, and was a rowdy school of experience where boys joined in gangs as boys always will, and where the sons of the well-to-do on the Hill fought battles with boys from the poor quarters toward the North End. Little Charles did not object to fighting, but insults hurt more than blows. Dr. H. P. Walcott quotes Mrs. Charles Mills, an elder cousin of Eliot's, as saying to him in justification of Eliot's aloofness of manner, "You must realize that when he was a boy he was hooted off the Boston Common because of his face." He could not forget such experiences. Could any boy? He was naturally both sensitive and incapable of relieving his feelings by emotional expression. So when one of the first lessons he learned was that he must be blind to the glances of others and deaf to their comments, he developed a callous protective shell and accustomed himself, too young, to discourage familiarity. His parents taught him to think of what he did as what mattered, to seek assurances of contentment in his own courage and his own right deeds, "to look outward and not inward, forward and not back." Long before Edward Everett Hale had put his little series of mottoes into popular currency, the two admonitions which were often on Eliot's lips in later years had been unconsciously adopted by him.[1] They ex-

[1] "Look up and not down, look out and not in; look forward and not back, and lend a hand," was Hale's precept. "Lend-a-Hand Clubs" are still numerous throughout the country.

press his earliest discovered and most constantly cherished recipe for living happily. But it seems that for a while he was driven more than most boys are to seek companionship in his own home, where his principal playmates were his four sisters and his Lyman cousins. To be sure, he went out to school from the time when he was six or seven, but there is no evidence that he had any boyhood pals outside the family circle. Looking back at his childhood over an interval of thirty-odd years, he said:

"For me the days of childhood are not as rich and bright as later days. I do not know what people mean who say there are golden gates which part the soft and sunny path of childhood from the rough and wintry road of manhood, and who pretend that the light of life grows dimmer when these shining gates are passed. Are we not apt to forget how vivid and real are the pains, griefs and fears of childhood, and how unconscious many of its joys? It was no small deliverance to outgrow the fear of bigger boys, particularly of Mason-Streeters and North-Enders, and of dogs and ferules, and of the imaginary imps and robbers that haunted dark rooms, and lurked under beds and in closets, and hid behind trees in the dim woods, and among the rocks upon the lonely shore. We underrate the intensity of the painful emotions of youth. Since I became a man I have seen a murderer's head cut off with a two-handed sword with less shuddering abhorrence than filled my childish breast at witnessing certain public executions [*sic*] at the Latin School." [1]

[1] Dinner of Latin School Association; Nov. 13, 1878.

His first lessons were given him in his parents' house, where a Miss Sumner held a little class composed of young Charles and his cousins Arthur and Sarah Lyman. The two boys used to frighten Miss Sumner by shooting off popguns at her from behind a woodbox that stood under the stairs in the back entry. Next he was sent out to a dame school for little boys and girls that was "kept by the Misses Cushing in a private house on Bowdoin Street." At the age of seven, Charles was transferred to a private school for boys that the Reverend Thomas Russell Sullivan kept in the basement under the Park Street Church. Three years later he entered the Boston Latin School of which Epes Sargent Dixwell was then the head master. The pupils of the Latin School were almost all of American birth in the forties, and a large proportion of its graduates went on to Harvard College. It enjoyed a very high reputation among the schools of New England, but it was "conservatively managed" — which meant that the curriculum consisted of Latin, Greek, and mathematics, with a little attention to ancient history, composition and declamation. Charles Francis Adams was in the school for three years, two or three classes below Eliot, hated the place and says that it "was a dull, traditional, lifeless day-academy, in which a conventional, commonplace, platoon front, educational drill was carried on" in rooms that "were unspeakably gloomy." [1] This may be harsh, but Eliot himself used to draw on his recollection of the bleak narrowness of the Latin School course for contrasts with

[1] *Autobiography*, 22–23.

the sort of liberal and interesting curriculum that he advocated later. With the possible exception of "declamation," he found no pleasure in his studies at any of the three schools he successively attended until he reached the Greek and Latin poets in the last two years at the Latin School. He did his lessons easily and well, however, and acknowledged that they gave him practice in memorizing and applying his attention to a prescribed task. He delivered the Salutatory Address in Latin at his graduation and on no less than four other "exhibition days" he was selected for a declamation.

"I do not rise to fawn or cringe to this House" was the way one of them began, and forty years afterward he could still recite most of Daniel O'Connell's oration "On the Irish Disturbance Bill." That his prize performances should always have been declamations is interesting. Oratory was in popular favor in the forties and all the great men of the day orated or read from public platforms or pulpits. Evidently public speaking had attractions for the boy. But also the "declamations" prove how resolutely he was overcoming his handicap; before he was fifteen he seems to have served notice on himself that his scarred face must never cause him to shrink from an audience.

Years after, when addressing a meeting of the Boston Latin School Association, he sketched his own boyish figure, all too briefly, in these words:

"I am sure we shall do well to think very tenderly and cheerfully of the boys we were. I confess to feeling a

certain grave and compassionate regard for a very small boy of fifteen, who in 1849 left the Latin School in a round jacket to go to college. He was reserved, industrious, independent and ambitious; he trod the giddy edge of precipices with a complete unconsciousness of danger. As I look back upon this little former self, that seen through thirty years seems quite another person than I, the child commands the man's respect, and I hold it to be one of my surest grounds of hope in this world and the next, that I have grown out of so estimable a boy." [1]

As usually appears when all the facts can be ascertained, much of what may rightly be called the boy's education was given him outside of school.

Charles's parents spared themselves no pains in bringing up their only son. They provided lessons in carpentering and wood-turning and installed a bench and lathe for him at the top of the Beacon Street house. They set up a hand press for him, and he and a fellow pupil in the Latin School set the type, corrected the proof, and struck off the pages of a weekly school paper; but it is to be noted that Eliot seldom wrote anything for it. There was

[1] For information about Eliot's boyhood I have been able to draw, not only on the knowledge of his son and grandchildren, but on unpublished recollections of Mrs. S. P. (Sarah Lyman) Sears and Mary (Eliot) Guild. Also largely on his own statement for the *Sixtieth Anniversary Report of the Harvard Class of 1853* (1913), and an article "How I Have Kept My Health and Working Power till Eighty," reprinted in *A Late Harvest.*

Allusions to his own schooling, what he was not taught, what he was taught and how, occur frequently in his speeches and papers on educational questions. His most interesting and complete single account of his education is in "Contributions to the History of American Teaching," *Educational Review,* XLII (1911), 346.

often music, especially singing in the house. The boy had a good voice and delighted in part-singing. So, as he never learned to read a score well, it may be right to infer that his father encouraged him to sing for the pleasure of it, but did not make him work at music.

Out-of-door pastimes counted too. We shall not go far wrong if we suppose that when Charles entered Mr. Sullivan's school on Park Street at the age of seven, he also graduated from household and back yard supervision to the status of a boy on the Common. Thereafter his shortest path to and from school ran across the Common. In spite of the battles between Beacon-Hillers or Latin-Schoolers and North-Enders, which sometimes made it a place of danger as well as excitement, and in spite of the gibes which were hurled at little Charles there, the Common was, what he himself called it, "a delightful playground for boys." His parents could remember it as a cow-pasture, and there was still an enticing naturalness about its footways, its green expanses, and its Frog Pond. Below its western edge the new Public Garden and the Back Bay were open spaces full of gleaming waters and shining flats. In one or another part of the Common Charles and other boys played the simple games of ball then in vogue and hop-scotch and marbles in their season, and coasted on sleds in winter. They ran races around the outer walk at all times of year. It was an honor to do well in those hard and oft-repeated races, for they were more than a mile long and tried a boy's legs and wind and courage. In bed at night Charles still felt

the Common just across the street. The smell of asphalt did not then taint the good odors of earth and verdure that floated into his open window in the spring. In winter he could harken to the ice-bound branches of the elms and linden trees creaking in the wind. And of a summer's evening he heard "the rustle of hundreds of feet on the gravel walk of the mall as the men and women walked there together in the cool of the day." Gentle sounds of happy multitudes which softly filled his room. He loved to listen to them, and so long as he lived he liked to revive their pleasant echoes in the ear-chambers of memory.

When Charles was quite small his father adopted Nahant as a summer home. Nahant is a long promontory, almost an island, that reaches southward from near Lynn a short dozen miles from Boston. Its irregular and rocky shores are washed by the open Atlantic, and all the breezes of heaven blow over the pastures, glacier-worn ledges, and little intervals of salt marsh which compose its surface — or which did, with but slight interference by human "improvements," compose most of it in the fifties. One exception was the point which J. E. Lodge, Senator Lodge's father, bought and closed off against "trespassers," thereby deeply affronting the sentiment of the community and inaugurating a succession of acts for which Eliot disliked Lodges. A few Bostonians were then beginning to make Nahant the summer resort it has been ever since. And there Samuel A. Eliot, one of the early pioneers of their band, bought land. The meaningless absurdities which American architects were devising for

THE ELIOT HOUSE AT NAHANT

The house has been slightly altered by recent owners

American country places in the middle of the last century did not please him — to his credit be it remarked. So he built him a house in the likeness of a "Greek temple." It was not incongruous with a landscape of rocks, pastures, and sea, and it had charm.[1]

There the family always spent July and August while Charles was growing up. Once when he was big enough to be taken along on one of the frequent picnics, he behaved greedily or was in some way naughty and was banished, hungry, from the circle that was preparing its repast around a fire. The little fellow could not go home, and so he hovered in the offing while unassuageable resentment swelled within him until his breast was like to burst. Nobody seemed to heed him. They were beginning to eat; the fire crackled and licked the sides of a kettle of chowder. It was insupportable. He must retaliate. Rage possessed him. He caught up stones and hurled them at the picnickers and the chowder. The occasion was altogether terrific; never to be forgotten.

At Nahant the boy was out of doors all the time, swimming, rowing and learning to sail a boat, fishing from the rocks, collecting mushrooms on the pastures, driving, and riding. He did not follow these amusements to any high degree of technical perfection, as yacht-racing or cross-country riding may be pursued, and as modern sports are followed even by boys. That was not done then among the people he grew up with. But the

[1] The house now belongs to the Mifflin family. Alterations have been made in its upper portions, but as a whole it has been little changed.

conditions were the more favorable for an acquaintance with the various activities of life on a farm and along the shore. He was allowed the use of "an amiable but sprightly horse named Brilliant" on condition that he took all the care of it himself, and what he enjoyed most of all was roaming about on Brilliant. He "had a way with horses" and was a fearless rider and driver from boyhood.

These "recreations" were the serious occupations of older people. Though young Eliot engaged in them from boyish motives, they helped to bring him to maturity. Henry Adams has said that most New England boys of that time never were boys mentally. "Their education as men should have begun at ten years old. They were fully five years more mature than the English or European boy for whom schools were made." Eliot's favorite amusement for a day out of school during the winter — while he was twelve to fifteen years old — was to visit, sometimes with his father, sometimes with other boys, the sites of Revolutionary camps and engagements that were mentioned in Frothingham's "Siege of Boston." He also made visits to Waltham, and there, where his mother had spent her childhood, he played with his cousins by the brook and under the trees, or went farther afield to explore the farm and the country-side.

On Sundays there were two services to attend in King's Chapel. The family marched down Beacon Street two by two in good order for the morning service and Mrs. Eliot and the children arranged themselves in the third box-

pew from the rear on the center aisle while Mr. Eliot sat with the choir in the balcony above. In the afternoon the procession moved less briskly; Mrs. Eliot lagged a step or two behind her spouse, little Charles and his sisters were apt to straggle, and after all had reached their places, the children might reflect hungrily that their father, whom the balcony overhead raised a few feet nearer to heaven, was passing out bits of peppermint to help his fellow members in the choir keep awake. The family sang hymns and anthems Sunday evenings; and that was a custom which Charles enjoyed. In the intervals between church-going and family singing, the children were forbidden to play games, and only "good books" were supposed to be read. But Charles used to withdraw himself into a corner of the library, and there he went through all the available volumes of Dickens. Once his mother looked over his shoulder, but she made no comment, "merely bent down and kissed him"; whatever the rule, the reading went on. The Waverley Novels had not begun to lose their fascination, and he never outgrew his early conviction that they were the best of romances. Nobody read aloud to him — his mother was a person who had little commerce with books — but Charles read a good deal in his room at the top of the house. That was often done surreptitiously after bed-hour, by the light of a candle carefully balanced on the backs of two chairs. This ingenious arrangement must have been bad for his eyes, but neither he nor his parents realized that he needed glasses. Indeed, his parents seem not to have understood

that he was quite nearsighted. To tell time by the face of a big brass and crystal clock that stood between the dining-room windows, Charles used to have to get up from the dinner table and go to it. It was important for him to watch that clock during the midday meal for he wanted to be in time to join forces with certain friends while crossing the debatable Common on the way to the afternoon session of the Latin School. But his father took no notice except to reprimand him for jumping up from table. There were Spartan elements in the regimen to which the children were subjected. Every evening a tin bathtub full of cold water was placed in Charles's room to be ready for him to step into when he hopped out of bed in the morning. During the night the water got colder and colder. In fact it sometimes froze over. Then the boy used to splash it about a bit, dampen and rumple his towel and go to breakfast unbathed. Later he enjoyed telling his children and grandchildren about this fraudulent practice.

Clearly this grave and reserved youngster was much in the society of his elders. His mother was an uncomplicated nature in an envelope of sophisticated good breeding. She faced the little Boston world that encircled her with the composure of one who never doubted her own standards or her own position, and Boston, in return, offered her, all her life, its admiration and affection. In her quiet way she was a personage. One felt that she was firm-hearted, and one saw that she was beautiful and kind. The aspect of her erect figure, seated behind her

MARY LYMAN ELIOT
By Gilbert Stuart

tea-table, did not put one off or frighten even a child. In fact children felt drawn to her from the first. But it challenged whoever entered the room to pull himself together and make his manners. She respected the proprieties according to a well-defined code and her home was a school of old-fashioned deportment for her children. Manners included the observance of rules about form and behavior in company; about not putting your hand to your face or head, about not fidgeting or moving about aimlessly, about avoiding rusticities of attitude and meaningless tricks of gesture, about sitting up straight and not crossing your knees. "I observe," remarked Eliot at the age of seventy, "that young men sit this way [leaning back and slipping forward on the seat of his chair], and that they cross their legs thus [throwing one knee over the other]." *He* never did.

If one were minded to discuss the affairs of the day over a cup of tea or a glass of Madeira with intelligent people, number 31 Beacon Street was a pleasant house to enter. And so it was frequented by many people. In a sheaf of unpublished recollections the eldest daughter (Mary, later Mrs. C. E. Guild) says:

"Father and mother were both hospitable. They liked to give handsome dinners, usually of fourteen guests, sometimes of other married couples, oftener of men only, but always with mother at the head of the table. Perhaps this happened three or four times in favorable winters, but the open house was their habit for friends and the older nephews and nieces. Two of father's Cambridge

friends were at any time welcome to dinner, Mr. Jared Sparks, and Dr. J. G. Palfrey. Uncle Theodore and Uncle Charles were our most frequent visitors, generally dropping in for a talk with mother in the late afternoon. They chatted of domestic matters, mingled with anecdote from Uncle Charles.... The brothers and sisters discussed politics, for they were all, including mother, genuinely interested in public affairs. The development of Boston Harbor and its fortifications added a pleasant social element to our life, because it brought to the city and its neighborhood Army officers of distinction from the Civil Engineering Department. Their headquarters were usually at the Tremont House. The first that I remember was Captain Boyce and ... later Mr. Tom Carter of Virginia came to see us. His brother Charles Shirley Carter was a classmate of Uncle Charles Lyman's and he had known mother in her Waltham days. After the Mexican War his cousin, Robert E. Lee, then Colonel, was stationed for some time in charge of work at Fort Warren. He had served under General Scott and had many a tale to tell of adventures and narrow escapes and brilliant achievements. We were thrilled as we listened, and the cousins who sometimes joined us made a group of young people that he evidently enjoyed. His face was interesting, quickly changing from a serious expression to a brilliant smile and kindling eyes."

"Uncle Theodore" Lyman had been Mayor of Boston in 1834 and 1835 when the anti-Catholic rioters burned the Ursuline Convent. On another occasion he had saved

Garrison from the mob at the risk of his own life. Samuel A. Eliot had been Mayor of Boston too — for three years from 1837 to 1839 — and had called out the Lancers to quell the famous Broad Street riots. It may well have seemed to the boy whose first rough encounters were with North-Enders on the Common and Irish boys in the vacant lots where he went to trace out Revolutionary battle-grounds, that it was the special privilege of the men of his family to face mobs.

His father was both a useful and decorative citizen. He was a man of handsome presence and he dressed, morning and evening till the day of his death, in the swallow-tail coat and dark trousers that were then worn by dignified gentlemen. His talk and carriage were somewhat heavily ceremonious. But he was the kind of person people liked to see in positions of public trust, and his considerable abilities inspired confidence. The mayoralty has been mentioned. He was sent to the State Legislature for several years and also to Congress. There he served out another man's unfinished term in 1850, and there he closed his political career by following Mr. Webster and voting for the Fugitive Slave Law. On an issue like the slavery question he took the middle ground which most of the conservative and property-owning men in the North then took; he deplored "the institution," was helpful to particular Negroes who came his way, avoided the abolitionists and was heartily abused in the columns of "The Liberator." He had never thrown himself into politics as a career, and probably did not regret giving

them up. The time had come, too, when elective offices were passing out of the control of people of inherited wealth and social position, and men of his stamp were turning to the direction of charities and quasi-public institutions as outlets for their zeal for the common good. Samuel A. Eliot turned with them.

He was interested in popularizing good music; was president of the Boston Academy of Music from 1834 to 1847, and succeeded in introducing music into the public schools of Boston — probably the first American city in which that was done. He was a warden of King's Chapel and a leader of its volunteer choir. With his brother, William, he founded the Union Church at Nahant which must have been one of the earliest attempts to provide a church wherein ministers of different denominations should officiate. Every office, from superintendent to president, in a society whose name, "The Prison Discipline Society," strangely belied its pioneer work in prison reform, seems to have been filled by Samuel A. Eliot at one time or another. He was the first president of the Boston Provident Association, one of the earliest lay organizations for visiting and relieving the poor. Perhaps more renown would have attached itself to his name if he had not scattered his efforts so widely. There was hardly any end to the variety of his laudable endeavors.

Of course such things were a part of the daily talk that young Charles listened to at home. — And then there was Harvard College.

All the respectable Boston families sent their sons to

SAMUEL ATKINS ELIOT
Attributed to Gilbert Stuart

Harvard; all the Latin School boys expected or hoped to go there. From 1842 to 1853 Samuel A. Eliot was its treasurer and a member of its small governing board of seven. During those years Josiah Quincy, Edward Everett, and Jared Sparks were the presidents with whom he conferred and labored — all great figures in New England affairs and letters, although the latter two were, for various reasons, but mediocre presidents of the College. The time seemed to have come to establish an Observatory at Harvard; the treasurer raised money for it and took delight in superintending its construction. He helped Sparks collect materials for the "Life of Washington." His brother-in-law, George Ticknor, who was then writing his history of Spanish Literature in his house on Park Street just across the corner of the Common, had spent fifteen years in the Professorship of Belles Lettres trying — prematurely — to introduce an elective system and to reform the College in the direction of the German universities. In Cambridge another brother-in-law, Andrews Norton, was the Professor of Sacred Literature and — in the manner of its earliest controversial phase — a pillar of Unitarian theology in its Harvard stronghold. Harvard and its policies and affairs seemed to be quite naturally matters of concern to the Eliot family.

Samuel A. Eliot's views on theology may be gathered from a little book which he wrote for his children and which he later published under the title, "Observations on the Bible." Its author accepted the Mosaic account of creation, not as literally accurate, but as substantially

the best we have. He did not believe the Bible to be the "word of God" in a literal sense, and spoke of its being written in the exaggerated style of Oriental literatures. Consequently reason and conscience were to be applied to its interpretation. But he thought God had chosen the Hebrew people as instruments through which to teach men, and that the authors of the Bible were therefore essentially though not literally inspired — that "God had spoken to them" in the sense that he had communicated his wishes to their hearts and minds. He wrote skeptically or indignantly of the atonement, the total depravity of mankind, justification by faith, "and the other dogmas of Calvinism," and of the Trinity as an "absurdity"; but he believed in the Resurrection and in the miracles. "Excitement and agitation," said he, "are things not encouraged by Christianity. True religion is designed to produce permanent influences upon the heart and character, not transient emotions . . ." (p. 201).

The Boston of that day has retreated beyond the recollection of the living — a little city of brick houses and numerous pleasant gardens, where there was no quarter inhabited by the rich alone, but where much good society clustered around Bulfinch's State House on Beacon Hill, gazed over lower roofs to the masts and topsails of the ships in the harbor, or, looking across the Common in the evening, watched the sun set beyond tide flats that have vanished. We can recover it only from hearsays, history-books and memoirs. We know that there was more and more material prosperity and that well-to-do people were

treating themselves to the good things of the world like excellent wines, sumptuous dinners, lovely china, summer resorts and country places, and a little plumbing.[1] We can see that they were still conventional in a puritanical eighteenth-century manner, for they were too recently emancipated from Calvinistic severities and too much on the make to be gay and to value spontaneity. Even Charles Eliot's Uncle Ticknor, who was an apostle of learning and foreign culture in Boston, echoed the opinion that it was unseemly for Samuel A. Eliot to sing in the little King's Chapel choir and to invite its humbler members to practice in his own house. There were few sports and amusements. Yet there was adventure in all sufficiency — opportunities and risks on sea and land, in commerce and finance, in the dawning of the age of inventions, and in new ideas.

So much has been said about the dourness and gloominess of the Puritans and their descendants that we are in danger of ignoring the bright side of their lives. The city of Eliot's up-growing was happy in the feeling that it was borne up by a wave of new life. No one, not even a boy, could miss the buoyancy of it.

What has been called, absurdly and yet correctly, the New England renaissance was at flood. Bostonians believed in their own country, in their own city, and in

[1] It is worth noting that Charles W. Eliot's father was the kind of man who was fond of trying improvements. He installed one of the first bathtubs in Boston in the house on Beacon Street — its claim to be the first has been challenged! — and he set up a pioneer ice-chest upon whose design the mechanic who did the work based patents that were long profitable to him

their own time — which is by no means usually the case with the people of any community. They looked neither back as to a golden age whose grace had departed, nor forward to a New Jerusalem where present miseries should end. For the day of emancipation and hope had come, and it had seen fit to dawn in Boston. It was their day. They could admit that various things were wrong in the world, and yet do so cheerfully; for corrective measures were being inaugurated and to be busy about them seemed a happy occupation. The path of progress appeared to be open and to invite them to adventures in benevolence as well as in business. They had won their political independence and had established republican institutions. Their faith in them was unquestioning. The Puritan had believed, as in a cardinal tenet, that it was consonant with the divine order that he should pursue his own private gain and "be not slothful in business." That much of Puritanism continued undisturbed when Unitarianism arrived to resurrect a belief in man's inherent worthiness. So successful business men earned honor as well as dollars. The community was renovating itself and prospering like a green bay tree. Letters and the arts were being cultivated as never before on this continent, and there was suddenly a theology, a school of oratory, a group of historians, a literary output, such as have seldom appeared more admirably. Unitarianism, as the liberal revolt from a gloomy Calvinistic tradition was called, had fought its controversial battles, had established itself in most of the churches throughout eastern Massachusetts,

in Harvard College and in good society. Having passed through strife to victory and the possession of the fruits thereof, it was able to say urbanely that it cared little about questions of doctrine. Its ministers were still invested with something of the dignity of position that had marked their Puritan predecessors, and among them were many men whose cultivation, eloquence, and Christian spirit were truly beautiful. Under their leadership people had shaken off the oppressive nightmare of man's total depravity and the fear of an avenging God. They no longer waited upon the effects of a miracle for salvation. Each man might find something divine in his own heart and obey his maker in his own conscience. Human nature was really endowed with potentialities of spiritual beauty. The thing to do was to trust it, help it, and so advance toward the "perfect brotherhood of good will." "Eliza, do you kneel down in church and call yourself a miserable sinner?" exclaimed Mrs. Eliot to a friend who had joined the Episcopal Church — "Neither I nor any of my family will ever do that!" Virtuous living and an eager practice of philanthropy were taking the place of the soul-searchings and spiritual agonies that had been the essence of religious earnestness in other times and different societies. "I want to make myself useful in the world" — wrote F. L. Olmsted to a college friend in 1846 — "to make others happy, to help advance the condition of Society and hasten the preparation of the millennium, as well as other things too numerous to mention."[1] There

[1] F. L. Olmsted, Sr., *Forty Years of Landscape Architecture*, p. 77. (New York, 1928.)

spoke not only the spirit of generous youth, but the moral buoyancy of the time. Altruisms were too numerous to mention. The millennium was not enough.

The Eliots, living beside the State House, going and coming under Stuart's suave portraits of the previous generation, attending to the business of King's Chapel and Harvard College as if they were family affairs, were very much people of their time. They and their large clan of admirable cousins and still larger circle of estimable friends were all floating and advancing on the bosom of the same tide. Almost all the ideas that were being expressed so well by the New England writers and preachers came from people of their kind and class; almost all the useful institutions that embodied the new ideas were being established and built up by them and their relatives and friends or by persons like them. Their consciousness of position and their sense of public duty were essentially patrician. They could not help believing implicitly in themselves and in the future. In their midst optimism, a sanguine spirit, and a healthy-minded outward and forward looking way of facing the world flourished and were confirmed.

"I did not *find* in the Unitarian faith inspiration and strength," said Eliot in his old age; "I was born into it, and brought up in it; . . . I am emphatically a birthright Unitarian." He might have added, no less truly, that his temper and his nurture both predisposed him to his belief in democracy, utilitarianism, and the scientific method. A man, says Harnack, "can think, speak, and do absolutely

nothing at all in which his peculiar disposition and his own age are not co-efficients." The peculiar disposition and the age never suited each other better than in this case. It was as right for the human germ that was Charles W. Eliot to have grown up in the Boston of his youth as for the birch seed to be cast on the hillside or the willow by the stream. A personality of unusual self-consistency resulted. It was to prove itself invulnerable amid great changes, and to maintain its peculiar integrity to the end.

CHAPTER II

1849–1854

College — Some early letters — Exploring and collecting with Cooke and Storer — What career? — The twentieth birthday letter and the choice of a profession

In September, 1849, Charles W. Eliot, aged fifteen and a half years, entered Harvard College. The Class of 1853 began with eighty-seven members, of whom seventy-two came from Massachusetts and six from other parts of New England. Thirty found rooms in some one of the four College dormitories. The others lodged and boarded in private houses near the College grounds. Eliot roomed in a private house outside the College during his first two years. His cousin E. C. Guild appears to have been the only other student in the house.[1] Among his classmates were two cousins, Guild aforesaid and Arthur T. Lyman, and four boys who were to be his co-workers in the University in after years — J. Q. Adams, James Mills Peirce, A. S. Hill, and Justin Winsor.

The studies which a Harvard student pursued in 1849 were definitely laid down and limited in scope. The teaching staff of thirteen — President Sparks, four tutors, and an "instructor" being included in that number — drilled the boys in Latin, Greek, and mathematics, taught them a little history, led them to what we should call a merely superficial glance at the moral and natural sci-

[1] Mr. Farwell's in his Freshman year, Mr. Guthrie's in his Sophomore year.

ences; and when they became Seniors, offered them an opportunity to catch a brief glimpse of European literature in a very agreeable way by attending Professor Longfellow's weekly lectures. Except for a half-dozen such tid-bits, offered to Juniors or Seniors, almost all the instruction was given schoolmaster fashion and by means of textbooks out of which the boys recited to the teacher. There were a fair number of declamations and rhetorical exercises. The "declamations" consisted of the recital of passages learned by heart; "One of our number," wrote J. C. White, '53, in his diary, "has a strong melodious voice which fills the hall." [1] That was Eliot. The written exercises were compositions on prescribed topics like, "Thoughts suggested by observing that the Wicked are as zealous and persevering in accomplishing their objects as the Good," "The London Punch — Its services to Philanthropy and Liberty," "The Value of commonplace Topics of Conversation," and "Iphegenia [*sic*] in Tauris complains that the condition of woman is lamentable. How much has her condition been improved in 2000 years? How much remains to be done? And how far will Iphegenia's complaint always remain true?" (These four are taken from a long list of similar subjects to which a bundle of Eliot's exercises, still extant, shows that he did more justice than they deserved.) The conduct of the undergraduates was regulated by an elaborate code of disciplinary ordinances, which descended to such pettiness as a rule against lying on the grass in the Yard; and of course

[1] *Harv. Grad. Mag.*, XXI, 637.

the students were as fractious as they dared to be. Academic standing was determined according to a system of marking in which the quality of a boy's classwork was inseparably confused with his deportment record, so that a docile but stupid lamb might outrank a superior scholar who was caught in a good many pranks.

In his Freshman year, young Eliot studied Latin, Greek, mathematics, and a little ancient history. He also received a few lessons in the elements of chemistry from a textbook. In all his classes he earned good marks. Chemistry straightway excited his curiosity.

The following letter, the earliest that has been preserved, shows that at the end of his Freshman year he was still a boy, though a manly one. As the College term closed on July 17, it may be presumed that he had been at Nahant for a short fortnight when he wrote it. Mr. Samuel A. Eliot was doubtless in Washington, attending Congress.

To his Father

July 31, 1850

My Dear Father, — I received your letter on Saturday and I don't think that I should ever have written this unless I had experienced the pleasure of getting a letter, for I am afflicted down here with a great disposition to laziness. All I have done in the way of literature & study is reading two lives of two volumes apiece, getting two or three lessons in French grammer, reading the worst novel I ever saw, and making a general review of Scotts novels. I am out of doors the greater part of the time, chopping

wood, pumping water, and taking a good deal of general and some particular care of the horses, such as giving them their grain, watering them, &c.; I have been fishing two or three times, I go into [the] water a great deal, I drive the carriage always, and the rest of the time I *loaf* with Theodore [Lyman]. I have been to Boston twice since you went. . . . [A report on errands done in Boston is omitted.] I tried a saddle-horse which I did not like, and I have not decided what horse I shall take to Nahant; as I am going to have one only two weeks I thought it would be better to have him during the last two weeks, for I should be sure to feel lonesome and nothing-to-do-ish, when he was gone.

And now I am going to launch out about the carriage horses. The long-tailed bays on the very night that we carried mother over to the depot ran away. The off horse was frightened at the engine and began to back quite violently, as there was a carriage behind driven by a woman, I had to stop his backing; I spoke to him and finally touched [him] with the whip. He gave a most tremendous spring; I reined them short round, intending to let them go up the street, but I found the road blocked up with carriages standing directly across it; the horses were on the full run, and the nearest space was a stable yard on my left, but I directly saw that I should not get into it, and that they were going strait for a post which stood on the corner of the yard. I just had time to steer them so that the post passed between the horses and they were on it; the post broke the pole, got by the circle somehow or other

and struck the perch-pole under the body of the carriage; the horses broke from the carriage and ran into the yard — the nigh horse jumped two fences and stopt, the off-horse leaped three fences and landed in a pig-sty. The girls went over in the stage and I took the horses and drove them home in a buggy from the stable. When the horses cleared from the carriage I was left in the carriage on top of the post, with the hand pieces in my hands. How they got there I can't conceive for the buckles were bent and the leather pulled off from them. The reins must have caught somewhere. From the time the horse first jumped to the time I jumped from the carriage on top of the post wasn't more than five seconds while mother and Lizzie were getting into the cars. By great good luck the girls all got out, and they did not see it and knew nothing about it till I told them. The horses were not injured at all; the carriage was hurt a little but was all mended in two days. I drove the bays twice afterwards but they acted in such a manner as made it decidedly best to change them. We have now got a pair of greys who go quite well, are perfectly safe, but lean and ugly. John was mad as hops at first because they were so ugly but as they improve a little in appearance, he is a little better reconciled to them.

After considerable exertion I have got the fence grey-washed. We have had a succession of company, and I perform the formidable duty of carving. Yesterday I had to cut a small leg of mutton for 9. I expect the express every minute, so I must stop, though I might say a good deal

more. We are all right and going on as smoothly as possible. I hope you will be able to read this epistle, but I have some doubts. You may say all things affectionate and proper to "ma" and to Lizzie from, Your affec. son

CHA'S W. ELIOT

In his Junior year Charles moved into one of the College dormitories — room number 8 in Stoughton Hall, to be exact. Some of his personal traits were already becoming discernible. He was aware that he lacked the qualities that invite and reward good-fellowship, was conscious of the scar on his face, and was shy. It was a handicap, socially, not to be able to recognize an acquaintance ten to fifteen feet away. He must sometimes have appeared to be priggish, for even in his teens what was natural to him was to live his life according to the dictates of his reason and not according to the usual impulses of boyhood. He seemed to feel no temptation to get drunk or to engage in pranks or escapades, although there was a good deal of drinking and rowdiness among the undergraduates. He liked to work diligently and already knew how to do his work so promptly and well that he was ranked among the four first scholars of his class even during several months of his Junior year when his eyes failed him completely and he had to have all his textbooks read aloud to him. "From the beginning of our Freshman year," said A. S. Hill, "I sat near him for an hour or two every day in one of those small sections into which every class was divided, but it was months before I made his acquaintance; and I never

in undergraduate days knew him well. Few of his classmates did."[1] He was duly taken into the Institute of 1770, the large Sophomore society which elected about half of each class; discouraged the approach which was made to him by a small and purely social club, the Porcellian, because he considered that there was too much dissipation among its members; and accepted election to the Α. Δ. Φ., which was then a small literary fraternity. Its creditable membership included Charles F. Dunbar and C. C. Langdell of '51; Joseph and W. G. Choate and James B. Thayer of '52; Arthur T. Lyman, A. S. Hill, and Wilder Dwight of Eliot's class; H. H. Furness and Charles Russell Lowell of the class below; and, later, Phillips Brooks, Francis C. Barlow, and Henry L. Higginson of '55 — all young then; all youths whose promise time fulfilled. He made a few excellent friends,[2] though it was to be the case that after graduation the ways of most of them were to lie apart from his. One was a young man named Theodore Tebbets, who was two years above him in the College and was headed for the Unitarian ministry. An intimacy sprang up between the two while Tebbets was engaged to read Eliot's lessons aloud to him. Sometimes Eliot went to Tebbets's room in Divinity Hall for these readings, and it was there that he used to find a law student named Langdell standing before the fire and

[1] *Harvard Crimson*, March 23, 1904; also quoted by E. H. Cotton, *Eliot*, 53.

[2] Of whom it is possible to name the following with confidence — Wilder Dwight (died 1862), E. C. Guild (a cousin), Arthur T. Lyman (a cousin), Edward Pearce, Theodore Lyman (another cousin, but not a brother of Arthur), Theodore Tebbets, F. H. Storer, Josiah P. Cooke.

eating "with a good appetite" a bowl of brown bread and milk. Langdell was helping Theophilus Parsons prepare the notes for his "Treatise on Contracts," and while he ate his simple supper he talked to Tebbets and Eliot about the law. "I was a mere boy; but it was given to me to understand that I was listening to a man of genius." [1]

Tebbets's career was cut short by death in 1863, but a number of Eliot's letters to him have been preserved, and three shall be quoted.

The first speaks of listening drowsily to the absurdities of Carlyle (presumably while Tebbets read them aloud) and goes on to express an opinion of Emerson which may be taken to prove that the boy's family belonged to that wing of Unitarianism which had not fallen under the spell of Emerson's transcendentalism. It ends — for the whole letter need not be repeated — with an explanation: "I have thus availed myself of the permission so kindly extended to me to write a *foolish* letter — would that I could say funny, but of that faculty of humor Nature has given you the lion's share."

To Theodore Tebbets

Feb. 11, 1852

. . . My young transcendentalist, if my respect for Mr. Emerson was considerably increased by the first lecture I heard from him, the second completely disgusted me. It was the most rambling, pointless discourse on no subject whatever that I ever listened to. His subject was nominally

[1] Report of Meeting of *Harv. Law Sch. Ass'n.*, November 5, 1886 (Boston, 1887). To the same effect, *Mass. Hist. Soc. Proc.* (October, 1923), 10–11.

"Worship"; nothing upon that serious topic did I hear; but his lecture was chiefly composed of what were meant to be jokes, but were specimens of exceedingly bad wit and bad taste, and of quotations from old English authors, which were so quaint as to border on the indecent. Said he "There is such a thing as truth." He might appropriately have inserted before "truth" the word *commonplace*. He also made the profound observation that the Union and the solar system are safe; I sincerely hope that is so, but no thanks to him, his brethren, or his *followers*, Theodore, for its security. On the whole, though the room was crammed with people who were hanging on his words with delight, I came to the conclusion that I should stand less chance of hanging if I put the door between myself and the object of my indignation. I therefore evaporated after watching the escape of his gas for three quarters of an hour. As you may conjecture from the last sentence my chief interest at present is chemistry. I have the use of a very good forge, and by plying the bellows some 4 or 5 hours a day I manage to keep the iron pretty hot, much to the disgust of some of my family who are afraid that I shall burn my fingers. I am of course brought much into connection with the Professor and his assistant. Cooke in spite of the almost universal prejudice against him I like much; he would be defined by those who know him, especially if with Hamilton they believed that the soul has its seat in the hand as much as in the head or the heart, as a tremulous conservative young soul of much promise and of many kindnesses and generosities. I know you despise

him but to your arguments I should reply "he must be seen to be appreciated." Storer is a fellow two years older than myself, but he has so much of youthfulness in his manners, language and actions that I feel quite on a level with him. Take them both together and you may consider me very well off as regards company. People are continually asking me "What *are* you studying chemistry for? *Do* you mean to be a professor?!!! I merely say that I don't know what I am going to be (who does?), and believe with Dr. Johnson that the same habits of observation of order, of care are cultivated in small things as in great. So I leave '*cui bono*? to the fool,' and find that —

> Toil and development
> Are way, reward and end."

I am going into music just at present strong; go to most of the concerts and oratorios and always to church, where, Theodore, I, who am blessed with ears to hear, hear something which is not appreciated by the uninitiated. . . . Four weeks of the vacation are gone, and I have written neither theme nor forensic for next term, but I am bound to write my theme at least this week, and I wish you would ask the young ladies by whom I suppose that you are surrounded whether they agree with Iphigenia that the condition of women is lamentable, and especially will you inquire of them how far Iphigenia's complaint will always remain true. To you as an instructor I appeal to know how much remains to be done. . . .

Cooke, of the foregoing letter, was of course Josiah P.

Cooke, who was the young Professor of Chemistry and who was always afflicted with a trembling of the hand. Francis H. Storer was Cooke's assistant. With both chemists Eliot was to have much to do, as the reader will see. The furnace was one which Eliot set up on the top floor of the Beacon Street house. The College provided no laboratory facilities for the use of students. Cooke had equipped a laboratory in the basement of University Hall at his own expense, and as a personal favor he allowed Eliot to potter about in it. An extract from another letter to Tebbets, written in June, 1852, announces the first of a succession of holiday expeditions with Cooke and Storer.

"Cooke, who is a brick, Storer, who is another, and Eliot are going off on a geological, mineralogical, and physiological toot, a scheme which is pronounced by students, who don't know Cooke, to be damned odd and disagreeable, by the family, who don't know Storer, to be rather queer and oldish, and by young ladies, who don't know any of us, to be extremely delightful. As usual the young ladies are about right. We shall start the Friday after Commencement, proceeding from the Green mountains in the southern part of Vermont through Berkshire into Connecticut across to Catskill, down into N. Jersey, thence to the coal region of Pennsylvania and home through the western part of N. York. We shall walk it, horse it or steam it, as we wish and can, and I for one expect to get a little knowledge and a great deal of health."

What is omitted from the next letter was good advice

about Tebbets's efforts to support himself while completing his preparation for the ministry. It shows that Eliot began early to give such advice, but is too long for inclusion. During this, his senior year, the boy was rooming alone in Hollis, number 15.

March 3, 1853

My Dear Theodore, — The first day of the term may seem rather a funny day for me to find leisure to write to you in, but the fact is I am not a freshman in years, and therefore I get in order very quick, find myself quite at home, sit down, and think repentantly of my shortcomings, till it strikes me that repentance is not good for much which does not lead to action, and consequently that I can't do a better thing than write you as much of a letter as a moping, melancholy, disheartened, ground senior, who has eaten rather too much dinner, and has the prospect of going to private theatricals tomorrow, may.

The other day I came to the conclusion that this eternal cultivation of the intellect is not the source of all the happiness in the world, nor even of a large part of it, that this continual effort to improve one's mind is too selfish and unfruitful to be very satisfactory, and that this everlasting digging can at best produce but a fruit with a stone at its heart.

It occurred to me that he who buried his talent must have done it by digging. I feel a sort of an indefinite longing to be doing somebody else good, besides myself (if indeed I can be said to be doing even that), to be active and

useful, not grinding out themes, and sifting Tacitus; secondly I feel that I ought to be more sociable and communicative than I am. What do you propose to do about it? — is a question which I naturally put to myself. Well, while I was in town I made a desperate rush, and made sundry visits to my numerous relations, and really, considering that I am as little fitted for a social being, as civilized man can be, I did not have so bad a time as was to be expected. In view of my active, philanthropic tendencies (for which I provided a safety-valve in the shape of a little book-keeping during vacation) I do not feel particularly delighted at the prospect of a term's hard, dull, anxious digging, enlivened by Exhibition and Commencement, but I mean to discharge my social duties with rather more fidelity, or less neglect than heretofore; still I find it hard to kindle a very warm affection for my neighbor Carroll, or to feel any thing but weariness when I see Wilson, or disgust when I encounter H——. In spite of some difficulties of this nature, it will be possible for me to cherish rather more general sympathies, and to exchange my wonted solemnity for a somewhat more cheerful and less reserved manner; in this operation I expect to be aided by my new position as President of the Α. Δ. Φ. You are so different from me in this respect that you won't understand the first doubtful attempts of a stiff, pokerish, glum, unattractive young man, who is just waking up to the great truth that the proper study and the true happiness of mankind is to be found in intercourse with man, and I may add, woman.

CHARLES W. ELIOT
From the class-album of the Harvard Class of 1853

The college work of this term (I'm not sorry it's the last) is likely to be pleasant enough, for we have studies which I wish to pursue, and instructers who are all fit for their places; Dr. Walker in Natural and Revealed Religion, and Rev. F. Bowen in Political Economy and Kent's Commentaries, Prof. Peirce on Mechanics, Lectures from Dr. W[yman?], Prof. Lovering on Electricity, Agassiz on Embryology, and Cooke on something. In Latin we read [the] Annals of Tacitus, and I may say that the first two pages of Lib. II contain some embarrassing points. Altogether considering that it is the last term and the summer term, I think I shall endure with patience, till deliverance comes, and not hope for any greater mercies than a rank as high as fourth, and two decent subjects for two not-disgraceful parts, which if you know of please communicate....Your affec. friend

CHARLES W. E.

In July Eliot graduated. His cousin Theodore Lyman sent him some small gift as a memento of the occasion and Eliot wrote in acknowledgment:

... If you and I are unlike in most respects, we are alike in one, at least; we have a decided affinity for each other.

You are an acid, because you make a cheerful effervescence when brought in contact with mental material as hard and cold as marble; I am an alkali distinguished by the property of giving many people the blues.

May the salt, which is formed when we meet, never lose its savor! With many thanks, I am, Your sincere friend

CHARLES W. ELIOT

His rank, at graduation, was determined by total averages for four years, including the period when he was unable to use his eyes, and was that of second in the class.[1] During the fourth year he led the class, and at the end faced the Commencement Day audience and declaimed "An English Oration" on "The Last Hours of Copernicus." No less than forty-four orations, poems, essays, and dissertations were delivered before the patient assembly on that twentieth day of July in the year of grace 1853 and the program was prolonged by five "musical interludes." Eliot's "oration" was the forty-third. One must admire the nerves of a boy who could wait so long to do his part, and one wonders that any one present was still able to listen when he stood up to speak. But Mr. Thomas Russell Sullivan, master of the little school "in the basement of the Park Street Church," wrote to congratulate Samuel A. Eliot on the performance of his son and to applaud himself discreetly on account of the pupil who had left his school at the age of ten. The Reverend Mr. Whitney, he reported, "remarked that Charles la-

[1] In a scrap-book of Eliot's (Scrap-Book II, Item 126) there is a sheet of paper on which the first few lines are as follows:

Actual Scale of my Class in College			*Scale corrected by E. Pearce for unequal Electives*		
1	Carroll	26269	1	Carroll	27128
2	Eliot	26142	2	Eliot	26478
3	Erving	25659	3	Erving	26041
4	Pearce	25467	4	Pearce	25838

bored under the disadvantage of having been anticipated in his subject by Edward Everett, but he thought that Eliot had succeeded in making it more touching." Good Mr. Whitney, fond Mr. Sullivan! The oration was in fact an artificial exercise that contained no matter worthy of latter-day remark except a statement that "man had lived under the heavens 5000 years before" Copernicus. Unitarianism was interpreting the Bible by the aid of reason and Eliot had studied mineralogy for two years; but the intellectual atmosphere he breathed was still pre-Darwinian.

Something more interesting had appeared in another of his exercises, addressed to the proposition that"General Scholars please themselves most; but those who prosecute one particular Subject, do most service to the World" — the essence, namely, of an argument against "disciplinary studies" which he was to press again and again: "When the general student undertakes to make himself familiar with all branches of knowledge, he necessarily pursues some of them under a disadvantage. The time which he spends upon those which are distasteful to him, will be more than half wasted, not because it is unoccupied, but because it might be so much better employed. With hard labor he will make but little progress in a study to which he is disinclined, while with much less exertion he can advance far and rapidly into the depths of a science which attracts him." Generalizing from his own experience at the age of twenty, he could hardly have concluded otherwise. For he was painstaking, resolute by nature, and

ambitious. Such a man may pursue his interests wherever they lead him and feels, while doing so, that he is developing his powers. He disciplines himself.

If we look for other signs of what Eliot had got from teachers and books by the time he was twenty, we are soon driven to inference. It is clear that he enjoyed the classics well enough to earn as high a rank in these as in any other studies. But there is no evidence that he ever opened a Greek or Latin author after he left College. It would be interesting to know what he read in English, for young men who attended Harvard in the early fifties had a large margin of leisure for the indulgence of their personal tastes. But we have little information, and that rests on a few hints dropped in later years. Apparently he had read more or less fiction written by the novelists whom all young people were then reading — Scott, Dickens, Thackeray, Cooper, Bulwer Lytton, and, it would seem, Manzoni. When George Eliot's novels appeared they made a stronger appeal to his ethical-mindedness. There is nothing to indicate that he nourished himself on the works of any poet. He could not have escaped Shakespeare and Bacon's Essays any more than he could have escaped the Bible. But he experienced no gnawing uneasiness about the Constitution of the universe, and did not read philosophy. Carlyle and Emerson marked his nearest approach to it, and it appears that his first acquaintance with those authors made little impression. Dana's "Two Years before the Mast" did impress him. Olmsted's "Journey in the Seaboard Slave States"

appeared in 1856 and was shortly followed by his "Journey Through Texas" and "Journey in the Back Country." These illuminating contributions to the great discussion of the day also commanded his admiration. It may be doubted whether he ever browsed for the love of literature alone, or to satisfy a speculative unrest. He had a thirst for usable knowledge and read in a practical way to find this or that. In short, he used books rather than loved them, sought and absorbed what he wanted, and skipped the rest.

The studies which Eliot found most stimulating were mathematics, chemistry, and mineralogy. The College did not count more than a very little chemistry and mineralogy as helping to a degree; so he pursued these subjects as a volunteer in Cooke's little laboratory, alone over his forge in the attic of 31 Beacon Street, and on holiday jaunts with Cooke and Storer.

Those excursions, made during the summers between 1852 and 1857, deserve a glance. Sometimes Cooke and Eliot were alone, sometimes Storer joined them. They "horsed it or steamed it" where they could, but mostly they legged it with packs on their backs. Their object was to study geology on the ground as well as in books, to find minerals for the collection that Cooke had already begun to build up at Harvard, to visit mines, to inspect forges, smelters, and factories, and to acquaint themselves with their technical processes. There is no way of seeing the country like roving about on foot, with a geologist's hammer in hand, and a head full of questions to ask about

any local enterprise. These long-legged young men, doing their fifteen to twenty-five miles a day, or stopping to explore and collect, went through Nova Scotia, New Brunswick, parts of Quebec, New York State, New Jersey, and some of the Pennsylvania mining regions, not to speak of parts of Maine, New Hampshire, Vermont, and the Berkshires of their own State. On the unsteady boat to Digby, "the two 'chaps from the States' with knapsacks, an extraordinary hammer, and an undisturbed equilibrium excited considerable astonishment and some admiration in the unsophisticated minds of the natives." Eliot's eyesight, aided as it now was by glasses, was not so bad but that he could enjoy scenery and find nourishment for the romantic feeling that stirs for a while in the breast of every youth. "Some natural objects," he wrote, after visiting the Saguenay, "like a fine standard history, seem great enough for everybody to study and enjoy, but there is another sort of scenery which is more like a letter from an intimate friend; you enjoy it all the more because you feel that it was intended for you alone, and know that no one else has ever read it." He wrote long letters home in the occasional intervals between steady walking and physical fatigue, and filled them with facts about places, mines, factories, people met in farmhouses and inns, their manners and their opinions. They prove his capacity for physical endurance and display the turn of mind that already led Eliot to deal with all things by enumerating their parts and elements and to store these up as if his memory were a fact collector's

cabinet. Even on the rare occasions when he tried to be facetious, the enumerative habit asserted itself. "I found," he wrote from Sharon Springs, New York, "by an experiment upon three or four tumblers, that the water was cool and agreeable to the taste, warm beneath the waistcoat, and that it awakened by its smell refreshing recollections of the laboratory and the dock, not to speak of Back Bay." Concerning the French-Canadian settlers in upper New Brunswick — the first French-Canadians he had been among, he reported: "Their language is their greatest peculiarity. . . . They talk of leagues instead of miles, beat their clothes with a stick instead of washing them, inhabit houses with curved instead of straight roofs, are ignorant and Catholics; moreover, they are quite neat about their houses, which is the best of their peculiar customs."

Cooke and Eliot had just done two hundred and fifty miles across New Brunswick in ten days, all of it on foot and under packs, except forty miles of canoeing against current and wind.

Once out of College, the immediate question was What to do in life? But Eliot was uncertain. His father did not try to force the decision, but made no concealment of his hope that the boy would go into business. He argued that a man of affairs could hope for a larger sphere of influence and therefore a better prospect of usefulness than a teacher. Doubtless he saw that his son possessed the abilities that would ensure success in business, and of

course knew that the family's wealth and position could help him to a good start. Charles inclined to science; but in that direction the way was not at all plainly marked.

He was not drawn to medicine, and the pursuit of science in other branches could not then be said to promise a career.[1] So he spent the winter of 1853–54 thinking things over in the Boston house. Meanwhile he studied German, French, and accounting, went to lectures — a practice to which Boston was notably addicted — and taught a night class of working men and boys in the Pitts Street School.[2] Extracts from his correspondence with Theodore Tebbets throw light on his state of mind.

To Theodore Tebbets

Jan. 19, 1854

. . . What a tremendous question it is — What shall I be? When a man answers that question he not only determines his sphere of usefulness in this world, he also decides in what *direction* his own mind shall be developed.

[1] D. C. Gilman, speaking at the Sheffield Scientific School anniversary in 1897, quoted Lounsbury: "No one at that time, however enthusiastic, ever dreamed of the supreme importance which the natural sciences were soon to assume in every well-devised system of education. The impression prevailed that chemistry, like virtue, must be its own reward."

[2] Perhaps it was at this time, or perhaps it was while he was in College, that he had another and less encouraging experience of teaching. "I remember being a pupil in the Sunday-School of King's Chapel: I remember, also, being a teacher there. But the Biblical instruction I received there I shed rapidly; and I found, when I undertook to teach some parts of the Bible to a class of lively boys in King's Chapel, that they could shed my Bible lessons faster than I could give them. I took refuge in a good story of Unitarian origin, 'Zenobia,' and told the boys that interesting tale of Christian-Roman times." (From an Address published as Bulletin No. 11; Social Service Series; American Unitarian Association.)

The different professions are not different roads converging to the same end; they are different roads, which starting from the same point *diverge* forever, for all we know. If I join the firm at 39 Milk St. tomorrow, I shall be an entirely different man 50 years hence from what I should have been had I gone into Cooke's laboratory, instead of the counting room. Now it seems to me that very few young men have the requisite data for an intelligent decision of the above question. But I can't believe that any earnest inquirer was ever left without light on any question which concerned his eternal welfare. Hence the choice of a profession is a question which concerns us in this world, but not in the next; and one of two propositions must be true — either all human knowledge will be found to be equally worthless, when this corruptible shall put on incorruption, or else all human knowledge is the birthright of every mortal, when he puts on immortality. This note has been a refreshing episode between German and French — Splendid German lesson, note, then French till bed-time, i.e. 1/4 to 11 o'clock. Good-bye,

CHARLIE W. E.

To the Same

Jan. 25, 1854

. . . I should be very grateful to anybody who would give me "a valiant impulse for systematic hoarding of time"; and yet it seems at first strange that heirs of immortality should be so careful of these mortal moments. Why be so stingy of time, when eternity is ours? Because we shall reap as we sow; because the minute-hand points

to the word "accountable"; because eternal misery is a thing possible, as well as eternal happiness. I wish I felt more the sacredness of time; it is such a common-place thing to live, that we never appreciate the solemnity of life; it is so common to be idle and thoughtless, that we congratulate ourselves on being comparatively serious and industrious. . . .

Jan. 29, 1854

... Yesterday I received a notification that I had been chosen into the Primary School Committee [of the City of Boston] and was expected to attend their meeting on Tuesday next. Each member of the Committee has a school to look after — I am to have one in Southac [*sic*] St. — one of the best schools in the City, under the charge of an excellent teacher; so I guess the school will not suffer from my inexperience.

So there is another demand on my time and attention. Now I don't mean to say that all these things are not very well in their way — I think they are, but they are not *study*. One thing I am clear about, I do like teaching — the pleasantest evenings for me are Pitts Street nights. I am beginning to dislike this undecided state of mind, this hesitating between two masters, commerce and chemistry; I see the usefulness of a true merchant, I acknowledge the dignity of the calling; but somehow the scientific profession stands always in the pleasantest light, its toils seem less toilsome, its pleasures more attractive. Congratulate yourself, Theodore, that you so early found the "one thing" to do.

It has been very cold here for the last two or three days — when I began to write I could not feel my pen at all, for I had just come in from walking, and my hand was numb; I felt as many of the Pitts Street boys feel, in whose hands the pens are as unmanageable as darning needles would be in ours. I intend to try rather an unusual experiment for me tonight, viz. to make a call on a female, previously dropping this letter into the P. O. I punched Ned [Guild], as you desired. Aff'ec yours

CHARLES W. E.

"I do like teaching" and "Somehow the scientific profession stands always in the pleasantest light." It was less and less to be doubted.

As his twentieth birthday approached, he wrote out his reasons and conclusions in the form of a letter to his mother. To address such an elaborate communication to one's own mother may seem a bit stilted, but there was a family precedent to be observed in this case. Charles's father when he left college had been set to write out a statement of his reasons for choosing to go into the ministry, and had done so in a letter which he had preserved and which still exists for instructive comparison with that of his son. The two documents bear little internal resemblance to each other, however. The father's was that of a docile-minded boy who restated in a conventional manner, as if writing a school exercise, what one imagines to have been the expressions of other people rather than his own undictated thought. The remarkable

thing about Charles Eliot's letter — the quality which makes it significant in spite of the fact that its conclusion has already been foreshadowed, and makes it worthy of publication in spite of its length — is that it manifests so unmistakably the manner of thought and the style that were later to become familiar. Composed as he was turning twenty, it is already authentically and characteristically his own.

The envelope is dated March 20.

To His Mother

March 16, 1854

Dear Mother, — I have chosen the profession of a student and teacher of science, and it is you who should first know my choice, and understand the grounds of my decision. I shall try to write out here the pith of all the thought which I have given to the subject for the last year and a half, and to show you the steps which led me to this conclusion.

"To do all to the glory of God" should be the ruling motive of a Christian's life.

Man glorifies God, 1st by being *useful*, 2nd by being *happy*. Before choosing the profession of a scientific scholar, I asked and answered two questions, — 1st — is that profession a useful one? 2nd — could *I* be happy therein?

I. I will answer the first question under three heads.

1. The scientific man is useful as a *teacher*. I need not describe a teacher's influence nor analyze the means of his usefulness; his calling is especially honored in this

community, and is especially needful, rather, it is absolutely necessary in this republican country. The physical resources of this country have been developed with marvellous rapidity; millions till its soil, millions are busy with its trade, millions labor in its workshops, but only a few thousands keep its schools, only a few hundreds direct its Colleges. The very maintenance of our free institutions depends on the education of the people. Surely he holds an honorable and responsible post, who labors in the cause of education, to diffuse that knowledge, and to stimulate that intellectual progress of the people, which alone can make safe the possession of national power and wealth, which alone can successfully contend against the monstrous vices which follow in the train of liberty and luxury. A distinguished teacher, whose precepts impart the truth, which his example makes attractive, who has control over the standard of education in the community, and who moreover sets a high example of scholastic attainments, is a man of influence, of reputation, and of usefulness. A successful teacher is a good and *useful citizen.*

2. Students write scientific school-books, text-books, hand-books, compendia, popular treatises &c., *useful* things, which the world can't do without, creditable things to him who does them well. One may write a good text-book without being a remarkable man, or even without any ample knowledge of the subject treated, for such books generally contain nothing original or new; they do but make available to the many common minds

that knowledge which the uncommon few discovered. The genius of the artist designs the statue, but mechanics cast it into bronze, and lift it to its pedestal, and then men throng to gaze at it. So genius discovers truth, but commoner minds give it a tangible form, and advertise it for exhibition; then all the world may study it. Again many scientific problems require only careful observation and indefatigable industry for their solution. Common abilities suffice for these, and on these common abilities are very usefully employed.

3. Scientific men *discover* new truth. He who teaches men a fact or principle which men never knew before, who adds something, small or great, to the sum of human knowledge, *does good*. There is no such thing as useless truth. But a great deal of this scientific truth has no practical bearing perhaps. What then? is it useless on that account? It is not meat for the body, but is it not meat for the mind? Knowledge is the food and clothing of the mind which else would be as naked as Adam was in Eden; knowledge gives man power over Nature. We can have no knowledge of that which does not exist, and nothing exists which is not worth knowing about.

> 'Ignorance is the curse of God,
> Knowledge the wing, wherewith we fly toward Heaven.'

But to discover truth is the prerogative of genius, a privilege not vouchsafed to common minds. It may be so, but I am inclined to believe that good judgment, perseverance, and industry are the true authors of many works generally attributed to Genius. Lazy men hold up

their hands in wonder at some great result which a laborious student has worked out, and exclaim, Marvellous genius! they give all the credit of the work to inspiration, and thereby excuse themselves, uninspired mortals, from doing any thing of the kind. But we shall see hereafter.

II. Would the life of a teacher and student be a happy one for me? I think it would be, —

1. because I enjoy teaching. I like to understand a subject with that thoroughness and precision which are indispensable in a teacher. I like to keep my own ideas so clear that others can see them. I enjoy communicating ideas to others; it is a pleasure to see the light of a bright idea breaking in on the recipient mind. I think I should enjoy lecturing; one always likes to do what he thinks he can do well; now I feel a reasonable confidence that I could learn to teach well in a recitation room, and consider it pretty well established that I can speak in public. In fact my strongest taste is the taste for teaching.

2. Natural studies, I mean scientific studies, have always been particularly attractive to me; they excite and stimulate me; when I hear other men talking of their plans, studies and successes, I always feel a strong desire "to go and do likewise." When I left College the thought that I should probably never know again as much science as I then knew, that I was to renounce such studies forever, was a very painful one to me. I subscribe to Bacon's opinion of the pleasures of the pursuit of truth, — "Truth, which only doth judge of itself, teacheth that the

Inquiry of Truth, which is the love-making, or wooing of it; the Knowledge of Truth, which is the Presence of it; and the Belief of Truth, which is the enjoying of it; is the *sovereign good* of *human nature*."

3. The study of Science, rightly pursued, ennobles and purifies the mind. He who studies Nature, studies the thoughts and works of God. God is revealed in His works as well as in His Word, and he who reverently contemplates the works, worships as truly as he who reads the word. The universe is the temple built by God, — the man who daily labors in that temple must sometimes lift his thoughts to Him who dwelleth therein. The scholar lives on a high intellectual level; it is his profession to improve himself in order that he may the better instruct others. This is an important point to me because I believe that "a steady regard in the conduct of life to the happiness and *perfection* of our own nature, and a *diligent study* of the *means* by which these ends may be attained" are among the most important and comprehensive of our duties to ourselves.

4. Science offers to her successful votaries a wide and honorable reputation as a reward for faithful service. Now fame is not the bread and meat which sustains life, but it is an agreeable dessert with which to conclude a substantial repast. Some teachers, says Horace, offer their pupils sweetcakes, to induce them to learn their letters. Not that there is no better reward for the labor of learning the alphabet, but the sugar is an additional inducement. Now I am free to confess that if I prove to

be a good enough boy, I shall quite enjoy the cakes. And what a splendid opening, what a magnificent field for young American science! New Colleges springing up everywhere, government expeditions by land and water, mines and factories, all requiring scientific aid, and very few scientific men to meet all this demand. The scientific men of America will make their mark on the page of history within the next fifty years, and the young man who starts now with a determination to be a good teacher and a thorough scholar stands a more than fair chance of becoming distinguished.

I have here made no comparison between the profession of a scholar and any other calling; and for these reasons, — I believe that all the professions are useful and honorable, that a young man may find in any one of them ample employment for mind and body, provided he brings to his work a genuine love of it; — moreover I think it quite impossible to predict in which profession a man would be *most* useful. Therefore the only questions which I need discuss are these, — is the profession of a scientific man useful, and is it the *most attractive* to me? To both of these questions I answer — Yes; and my choice of a profession is made.

There are other concerns which have more to do with the happiness of life than the profession one follows. A good home and friends, sympathy, affection and religion can make a man happy in the worst profession, and without these he would be unhappy in the best. I hope I shall never be clannish or narrow-minded. May I always take

an interest in whatever interests others, may I never think that my profession is the world, or that my horizon bounds the universe. And yet, while I honor other professions I must be devoted to my own; not slothful, but diligent and zealous in my calling. A man can love but one profession as he can love but one wife. And surely Traddles was excusable for considering Sophy "the dearest girl in the world," though probably no one else thought so.

Probably I shall always have enough *money* for myself, and something to spare for others; I shall be *independent* in any position, and, my dear Mother, I shall always be,

Your affectionate son,

CHARLES W. ELIOT

CHAPTER III

1854–1863

Teacher in Harvard College — Administrative Work — Chemistry — S. A. Eliot's failure — Marriage — The boat race in 1858 — Relations with Cooke — Transfer to the Lawrence Scientific School — The Civil War — Plan to reform the Scientific School — The Rumford Professorship — Gibbs appointed instead of Eliot

Eliot was appointed "Tutor in Mathematics" in Harvard College in the autumn of 1854. His appointment carried membership in the College Faculty with it, so that before he had attained his majority he began to take part in its discussions of College business and policy. It was then composed of thirteen members; three tutors besides himself, eight professors, and the newly elected president, James Walker. As an unmarried tutor, he was required to live in one of the College dormitories and to serve on what was called the "parietal board" — which is to say that he had to charge himself with the maintenance of order in the dormitories and College Yard.

Eliot continued to be a tutor in mathematics until the spring of 1858.

The undergraduates thought he was too wooden, too strict, and sometimes meddlesome. While the ancient system of petty disciplinary regulations was maintained at Harvard, a conscientious parietal officer could hardly hope to be popular with the student body. Eliot was inexperienced and is said to have been more conscientious

— which may be taken to mean more meticulous — in discharging his disciplinary duties than were most of his colleagues. The task of preserving order among boys who were hardly younger than himself must have intensified the austerity of his bearing.

In the classroom he was more fortunate. "Charles E[liot] is our mathematical tutor and is a very fair, gentlemanly, and pleasant one too," wrote a Sophomore in 1860. "Though cold as an icicle he is liked better than any other one." Certainly he was both efficient and respected as a teacher, and, considering his youth, that is all one could ask. There is no evidence that students went out of his classes to recall them with enthusiasm and special gratitude. But it is clear that he soon began to improve upon the traditional methods of instruction. In his second year, for instance, he and his fellow tutor, James Mills Peirce, rose up in criticism of the practice of examining boys by quizzing them before a committee of "visitors" from the Board of Overseers, who were discreetly presumed to know something of the subject but who patently knew nothing of the class. They persuaded the somewhat reluctant Faculty to let them grade their students by setting written examinations. Thus they inaugurated a reform which spread through the whole College. With the idea of making trigonometry more interesting, Eliot organized a dozen or fifteen volunteers into a surveying party. This little group surveyed the College grounds, putting down every building and tree, and then extended their operations to adjoining properties. Their map was

the first accurate plan of the College and it still exists in the College Library.

In the time that he could spare from teaching and other academic duties he worked at chemistry in Cooke's laboratory. As there was no regular provision for the registration of advanced students, his relation to Cooke and Storer was that of a volunteer pupil and — as he progressed — volunteer assistant. In 1856 he was given his first opportunity to teach a chemical class of his own, for that autumn Cooke, who had been giving instruction in the Medical School as well as in the College, quarreled with the Medical Faculty and Eliot was put in charge of his class at the School for the remainder of the year. The experience was useful, but the most consequential conclusion he drew from it was that the Medical School was in a feeble condition and was tolerating a deplorably low average level of attainment among its students.

In the spring of 1858 the College made him an assistant professor in "Mathematics and Chemistry." During the ensuing three years he taught regularly in both departments.

In the light of later developments it is interesting to find that the scanty records of the years during which Eliot was a teacher at Harvard afford proof of his administrative ability. It has been noted that he and Peirce inaugurated the system of written examinations. He turned his attention to matters of physical equipment as well as to examinations and map-making. He offered to charge

himself with all the necessary negotiations and arrangements if the College would allow him to contract with the Cambridge Gas Company for lights and meters in the dormitory in which he roomed. It appeared to President Walker that gas would be much more dangerous than candles and whale-oil lamps; but consent was finally obtained and of course it was not long before the consequent demonstration led to the use of gas light in all the dormitories. His correspondence file shows that for some reason or other — a reason seeming necessary considering that Eliot's subjects were mathematics and chemistry — it was through him rather than through the staff of the Library that the College placed orders in Germany for books and periodicals in the Departments of Literature as well as of Science; and in the early sixties he was writing about prices, binding, arrangements for payment and shipment, and was attending to customs clearances. In the fifties, as now, special committees of the Faculty were frequently appointed to consider this or to report on that or to do the other. A number of the reports from committees to which Eliot was named are written in his hand, or bear the stamp of his orderly and matter-of-fact style. It looks as if he was usually the member who did the work of the committee. When President Walker undertook to break up the classes into smaller sections, he called upon Eliot to devise a tabular-view or schedule of meetings for all classes and sections — a task which might be likened to the solving of a troublesome picture-puzzle. When the College was trying to erect Appleton Chapel and the building

would not get itself finished, Eliot was requested to take charge. Practically, he acted as supervisor of the job during its final stages. He felt a great liking and respect for President Walker, who was a man of unusual impressiveness in the pulpit and of rare moral qualities. But Walker was not a ready man of administration. Before Walker retired in 1860, it became usual for Eliot to call at his house the evening before a meeting of the Corporation and help him make up a docket of business for the next day. Eliot told later how it first dawned on him that he possessed some special talent for phrasing clear statements when Walker began to interrupt discussions in the Faculty by remarking "I think we had better pause for a few minutes and ask Mr. Eliot to draft a resolution."

This brief sketch of the course of the first teaching years may close with part of a letter to Tebbets. Its observations on the processes of the Harvard Faculty will be recognized by whoever has served on such a body as being perennially just.

To Theodore Tebbets

March 13, 1856

... In Faculty meetings lately I have heard such words used as "alteration," "change," "improvement," and even that much abused word "reform." Now-a-days "reformer" has become an opprobrious epithet, a satirical appellation; there is one worse name sometimes applied to a particularly narrow-minded, selfish, hypocritical, mean man, — his enemies call him "a professed

philanthropist." The Faculty is a ruminating animal; chewing a cud a long time, slowly bringing it into a digestible condition; then comes the process of assimilation which is gradual and invisible, so that by-standers do not perceive the growth and expansion of the animal.

The head-quarters of Conservatism are in the Colleges and other Institutions for teaching. The conservative spirit in politics is not nearly as stiff and invincible as literary conservatism. I think less and less of theories in education or politics or science. They were meant to simplify knowledge, not to complicate it, to facilitate, not to impede progress. A man builds a theory like a wall round a few facts, and generally he walls himself in. Luckily men can't fence in the Ocean of Truth — the beach is all covered with stone walls now. It is a great struggle to a man to resign a theory once adopted. If Calvin went to hell, it was undoubtedly one of his principal troubles there, to find that it was not paved with infants' bones, if he went to heaven he must have missed very much the enjoyment he expected to derive from witnessing the torments of the damned. Trigonometry is not one of the most interesting Mathematical subjects — there is too much practice and not enough theory. Teaching the use of Logarithms is very much like giving lessons in the multiplication table, — about as dull for the teacher and full as hard for the pupils. There has not been a thing to do in a Parietal way since you left the Board — I have not dressed in two minutes since the night you called me up in July; the mention of the name

July makes me cold, on the well known principle of the cold moon. By Jove, there is a confounded noise up in Harrod's(?) room this moment; this Parietal business is a nuisance, disagreeable to shirk and disagreeable to do. Of the two the last evil is the least, though a certain damage to one's influence as a teacher is to be included among the bad consequences of doing this sort of work. Getting worse and worse upstairs, singing now, though it is after eleven P.M. I rather think I had better give my attention to this subject at once, so Good-bye. I hope to get another, and more favorable bulletin from you soon.

Very affectionately,

CHARLES W. ELIOT

On his twentieth birthday Eliot said, "Probably I shall always have money enough for myself, and something to spare for others; I shall be independent in any position." But in 1857 the comfortable prospect was suddenly effaced. A firm of cotton factors in which Samuel A. Eliot had become a silent partner was caught with unwise commitments and forced into insolvency by the rapid tightening of credit that attended the panic of that year, and failed. It was clear that Samuel A. Eliot's relation to the business had not been active and that he was to be blamed for no more than incautious confidence in his partners. Whether he could have been held legally responsible for the debts of the firm was not determined judicially, because, as Dr. Andrew P. Peabody expressed it, "he refused his consent to any other arrangement than

the entire surrender of everything that he possessed, and from ample wealth, honorably held and used, he sank, or rather rose, into an even more honorable poverty." As the law stood then, his wife's property would have been liable for his legal debts, and what Mrs. Eliot had received from her father, including the house on Beacon Street, went into the liquidation with her husband's fortune. They earned the admiration and sympathy of their friends, but at Samuel A. Eliot's age, the failure naturally finished him as a man of affairs.[1]

Charles found himself facing the fact that he had nothing to look to but his teacher's salary and a legacy left him by his grandfather Lyman. What was more, his father and mother were suddenly without means of support and he had three unmarried sisters. It would have been quite natural for him to leave the College and go into business. But the thought of abandoning his chosen career does not seem to have been entertained seriously. Indeed, both his father and he displayed an admirable imperturbability. The old gentleman went to bed and slept as soundly as ever the night after the failure, and Charles simply went on with his College work while stiffening his back to the new burdens that fell upon his shoulders. *Plaie d'argent n'est pas mortelle* say the French. Yet not to be disconcerted when a fortune is swept away is surely to give proof that one has learned to live for ends toward which money does not so greatly count.

[1] *Vide* Andrew P. Peabody's memorial, "Samuel Atkins Eliot," in *Harvard Graduates Whom I Have Known*, 165.

His files for the years 1857 and 1858 make it plain that Charles now became the business man of the family. His judgment was good. He was trusted. Concerning arrangements that had to be made, people brought questions and suggestions to him which for one reason or another they felt diffident about taking to his father. He was able to make a substantial contribution to the family himself, for his grandfather's legacy had grown to the sum of forty thousand dollars. He transferred twelve thousand to his mother, and put eighteen thousand dollars more into the building of a double house on a bit of the Norton land on Kirkland Street in Cambridge. (It will be recalled that Mrs. Andrews Norton was Samuel A. Eliot's sister.) Mr. Edward Cabot's architectural firm lent him the facilities of its office, and there he drew up plans for the new house. He oversaw its erection and lodged his parents and three unmarried sisters in the westerly half of it. His promotion to an assistant-professorship with a better salary was a help.[1]

Such a catastrophe, though it may not throw one off his balance, is likely to be chilling. Inconvenience and loss are inflicted on many people and they do not all acquiesce gracefully. The breath of disaster blows about one like a winnowing blast, and leaves disillusionments and dislocations behind it. Mrs. Eliot was the person who was most affected; for she had never before experienced the least change. She had been born and brought up, had married, and borne children and begun to grow old

[1] This was the first appointment of an assistant professor at Harvard.

always in one and the same social corner; and now, suddenly, her whole mode of life was altered and all her small occupations were taken away. Samuel A. Eliot accepted the new conditions, after the family had moved to Cambridge, with genuine cheerfulness. Even riding on the horse-cars was agreeable to him. For their son, one natural effect of the ordeal must have been to confirm his self-reliance and ratify his reserve; another, to implant in him the bitter knowledge that some friendships cool in hard times. On the other hand, he discovered that friends who rise superior to the ordeal become doubly dear. Among those who were helpful, Theodore Lyman and his sister, Mrs. Gardiner Howland Shaw, were generous as well as considerate, and the friendship between Lyman and Eliot became, if possible, closer than ever.

The eastern end of the double house on Kirkland Street was to become Eliot's own home. For in the midst of the emotional harassments of 1857–58 he consoled himself by falling in love. Miss Ellen Derby Peabody was the daughter of the Reverend Ephraim Peabody, who had been the minister of King's Chapel from 1845 until his death in 1856. Eliot had known her as a playmate of his younger sisters since he was eleven years old, and had always thought her witty and pretty; but now saw her "in a new light." She was two years and three months his junior, slight of figure, neither short nor tall, with wavy light brown hair, and expressive blue eyes. Her gay and kindly disposition has been described as an unusual faculty for

happiness. She was imaginative, playful, expansive, and delightfully disposed to assume that it is natural to respond to whatever is engaging in other people. She was fond of landscape and had a modest turn for sketching. There were already a number of young men paying more or less earnest court to her amid an effervescence of good spirits that was usual in her neighborhood. Any one of them could undoubtedly have done more for her at a dance or at any kind of party than could Eliot, and his tall figure, his scarred face, his grave reserve, his serious conversation, and his general, total, deplorable incapacity for any youthful spontaneities made him seem a solemn and unprepossessing admirer. But he was clear about his own purpose, and Mrs. Peabody, who, first as the daughter of a luxurious house and then as the wife of a minister of small means, had seen enough of the world to know that character and abilities matter more than wealth, did her best to encourage him — "and Mrs. Peabody's best was very good," said Eliot later. With Ellen Peabody it could hardly have been a romantic love affair at the outset, but she divined in her stiff suitor a warmth of nature that he had no gift of expressing.

An old packet of letters yields a note which says both little and much.

To Ellen Peabody

Tuesday, March 30, 1858

My Dear Miss Ellen, — I beg that you will allow me to see you alone for a few moments this evening at about 8 o'clk. Charles W. Eliot

That was a pleasant spring evening, and Mrs. Peabody advised the young couple to go out for a walk. Eliot proposed; and within a month he was able to announce his happy news.

To Theodore Lyman

April 25, 1858

My Dear Boy, — I'm engaged(!!) to Ellen Peabody. A most astonishing thing, isn't it? I find it so — delightful too, — *rather*. I shall see you soon and then I will make a statement on the subject to you. Very affectionately

Charles W. Eliot

One congratulatory letter received by the Peabodys said "He is a regular cedar-post, firm, sound, and always in the same place." Who that knows the dry, unbending, sun-and-rain-resisting qualities of a cedar post could fail to recognize the justice of the figure. Eliot himself must have enjoyed the comparison.

Eight days before the wedding he wrote to Arthur T. Lyman as follows:

"It is quite impossible to be disappointed in the anticipated happiness of engagement and marriage, and yet I do not feel sure that these are the happiest things in life, for I have thus far found that every added year, while it brings graver responsibilities and perhaps serious trials, brings also deeper satisfactions and more conscious happiness. There are people who say that childhood is the happiest time of life — I think that both of us know to the

ELLEN PEABODY ELIOT
Æt. 31

contrary. We have not been in the habit of sleeping on roses, and have never been too eager for what are called the pleasures of life, may we both know by long experience the true happiness of usefulness, friendship and love.

"Very Sincerely & Affec'ly Yrs

"CHARLES W. ELIOT"

On October 27, 1858, the Reverend George Putnam performed the marriage ceremony at King's Chapel in the presence of half a hundred relatives and friends. Before moving into the new house in Cambridge, the couple spent four days in Mrs. Guild's house in Forest Hills. Thence Ellen wrote her mother that she did not know what to do with Charles. "He keeps in a perpetual state of *grinning*, and I am seriously afraid his mouth will never come straight."

During the period of the engagement one episode occurred which produced a letter that cannot be omitted. It was the famous boat race on the Charles River Basin. Accounts of this sporting event have been published so often that Harvard readers, at any rate, will require no explanations. For others it will suffice to mention that the race is memorable for more reasons than that Eliot was a member of the Harvard crew. One was that he and another member bought red silk handkerchiefs for their crew to tie round their heads as distinguishing marks and that the adoption of crimson as the Harvard color has been traced to those handkerchiefs. Furthermore, the

crew had had a special racing shell built, the first of its kind used at Harvard, and named it after the College. That six-oared shell dated an era in the history of rowing on the Charles. It had outriggers but not sliding seats, and its rudder was worked by the bow oar, who pressed pulley levers with his feet. The competing boats rowed back and forth over a mile and a half course, thus having to turn in the middle of the race. Eliot's weight was 138 pounds, his height 6 feet. Alexander Agassiz rowed *bow*. The other four were undergraduates.[1]

The superscription shows that the letter was written from 11 Holworthy Hall, and was begun at half-past noon on Saturday.

To Ellen Peabody

June 19 [1858]

VERY DEAR ELLEN, — ... What a day for our race! just perfect — clear and bright, not hot, no wind. If it is like this at 6 oclk tonight, those Irishmen will have to pull about as hard as they conveniently can in order to beat the Harvard. Crowninshield is going to row stroke, so I get my old oar — No. 3 — which I like better than any other. Everybody, as far as I have heard, thinks that the Harvard is to be beaten, and it certainly is very possible that she may be, but unless we meet with some accident, we shall make better time round the course than any American or Irish crew has ever made before, so that we shan't disgrace ourselves if we are beaten. I had rather

[1] There is a photograph of this crew, in its shell, opposite page 20 of *The H Book of Harvard Athletes* (Harv. Univ. Press, 1923).

win than not, but it is mighty little matter whether we beat or are beaten — rowing is not my profession, neither is it my love, — it is only recreation, fun, and health. I am going to remember your injunctions, and take the best possible care of myself, and row just as hard as I comfortably can, and not a bit harder. I have been rowing so much within three days that my fingers feel as stiff as any hodcarrier's, — hence certain eccentricities and irregularities in the form of my letters. I shall miss you this afternoon, *if* we win, — I had rather see you up in one of those windows, than see all the thousands of people that I suppose will be there. What do I care for them, and what don't I care for you! And I shall miss you tomorrow too — Sunday won't be Sunday without you. What a grind it was, bidding you good-bye in those cars, and letting you go off alone — I hope I shan't have to do that many times in our lives for I didn't relish it a bit — quite the contrary. Now I must stop, and when I go on that race will have been settled one way or the other.

Sunday morning 8½oclk.

Hurra! Hurra!! Hurra!!! We've beaten the entire crowd tremendously — and made the quickest time ever made round the course. 19 min. 22 sec. was our time; 21 min. 20 the time of the next boat; we therefore beat by 1 m. 58 s. which is a very large difference. Ellen, it was perfectly splendid — we had the sympathy of the entire crowd, and what a crowd it was! The moment we appeared, the people began to clap and hurrah — we looked

"flash," I tell you — and rowed mighty prettily up by the houses and back to our place which was on the outside, next the Judges boat. Then we saw the men we were to row against — great stout Irishmen, with awful muscles — as Crowninshield said, his heart was right in his mouth — in a moment Shimmin said "ready" and the pistol was fired. At the first stroke, Crowninshield bent his rowlock, we were too nervous, the boat rocked and we did not get ahead of all the boats as we hoped to. I saw two green boats shooting ahead of us, and felt decidedly scared. The girls [his sisters] were up at Dr. Hooper's, they saw that we were not ahead, and thought it was all up with us. If you had been there you would have been frightened. But in a moment we got steady, and pulled with a will, and the boat slipped along like a beauty, — we began to gain. How nice I felt! we left all the Irish boats but two in the first half mile, those two kept up, one nearly even with us, the other a little behind. At the end of the first mile we were rowing first, and we saw that we had the best chance of winning. The larboard side was a little too strong for the starboard (here Cooke came in to congratulate me, so I had to stop writing, and walk into town, to hear Mr. Huntington preach at the King's Chapel, and to go to church with my family for the last time in our old pew) so that I did not have to work as hard as I could by any means, and had time to see that we were ahead and likely to come first to the turning stake. Just as we had completely turned and started on the return, the next boat came so near us that her bow

nearly hit our stern; but that boat had only half turned and we had wholly turned and we stretched away from them before they could turn round, making a long gap between the two boats. In the next half mile the Irish boat next behind us began to pull up; Crowninshield saw it, and said "Come, fellows, she [is] gaining! Give way!" So we all put in together, and left that green boat behind, just like walking by a post, as Agassiz expressed it. Oh, wasn't it jolly! The boys say that Eliot was excited, and I know I felt mighty pleasant, not an idea of being tired. Goodwin heard a Sophomore giving an account of the matter on the steps of Hollis, and said Sophomore stated that "Eliot got tremendously excited," called Caspar Crowninshield, "Cas," and told him to "go it, my boy"; all of which is true in the main, I believe. In the last half mile the people shouted and clapped, and cheered tremendously, which was a very nice thing to hear, and made us pull all the harder and better — we came in in beautiful style, ever so far ahead of the next boat. What an ovation we had — the paddies behaved beautifully, — shook hands and owned up handsomely — Everybody seemed to be in a state of ecstasy; the Cambridge boys did not think that we should beat, so they were doubly glad, and made a great row about it in Boston, and afterwards at Cambridge.

Profs. Peirce, Agassiz, and Huntington were all in Boston to see the race, and came out to Cambridge in a state of exaltation. Huntington cheered and shouted to such an extent that he was as hoarse as a crow today.

There were many other circumstances which you would like to hear about, but I must take this letter to the post-office in five minutes or it will not reach you on Monday, as I hope it may, and if I say anything more about that race, I shan't have time to tell you how dearly I love you, how much more I should have enjoyed our victory, if you had been there to see, or how much I long to hear something from you. Tell me how you do, what you are enjoying and when you are coming home to

Your affectionate CHARLES W. E.

I have got lots more to say and shall write again very soon.

To the Same

[*June* 22, 1858]

... When I took your notes out of the post-office I felt exactly as I did just before the race, slightly nervous, agreeably excited, a little ticklish, something unusual about my heart. I was not a bit hurried about reading them, for this is my free day — everything else had to wait....

The defeated crews proposed a six-mile race for July 4 — twice up the Basin and back — and the "Harvard" rowed again. Before this race one of the other crews drew alongside and said: "You fellows are going to win; we can't row against that boat. We're poor; you don't need the prize money. We want you to divide the first prize with us and we will win the second." The first prize was

one hundred dollars, the second fifty dollars. The Harvard crew did not want the money, but reasoned that it would not do to make the second prize as desirable as the first. So it said it would give the Fort Hill crew forty dollars of the first prize, not fifty dollars. By this delicate arrangement the Harvard crew, clinging to a principle even in the moment of generosity, managed to increase the stakes for the Fort Hill crew while ensuring that each party to the understanding should have exactly the same ten-dollar incentive to come in first instead of second. Was the Assistant Professor of Mathematics the person who figured this out? Test it by calculation; the formula has the rightness of the only right solution. Was it attained in a flash of inspiration, or by the aid of algebra? The Harvard boat won the six-mile race and was followed across the finish line by its ten-dollar competitor. Some member of its crew — one wishes one might assume that it was Eliot — then took a Fort Hill oarsman aside and gave him forty dollars. Of course Ellen Peabody was told the story, and it seems as if one could hear the ring of her laugh. Later when questions of amateur standing came to be sharply argued between the colleges, Eliot used to enjoy explaining that he could not speak as an amateur oarsman, because he appeared to have been a professional.

By 1859, Cooke's laboratory began to be too small to hold the two men happily, although it had become a much more commodious place since the erection of

Boylston Hall. It was proper that Cooke should dominate it, but unfortunately he was sensitive, suspicious, and jealous if he thought his prerogatives were infringed, and immoderate when he took sides. Eliot applied for, and obtained, permission to fit up a small room in the basement of University Hall at his own expense in order that he might work "privately and independently." Personal difficulties with Cooke increased. Cambridge was a-buzz over the conversion of Dr. F. D. Huntington, then Plummer Professor of Christian Morals and Preacher to the College, from Unitarianism to Episcopalianism, and an unhappy theological dispute arose in the laboratory.

At Christmas time Eliot was writing a conciliatory letter, and Cooke replied: "... You wish me to show you some way out of the present difficulty. I think that there are two ways, both perfectly honorable and equally certain. The first is that we should come to an agreement to work together for one object and with our old aims. The second that you should give up Chemistry and turn your energies to some department of applied science. The first is the way which I should prefer, the second is the way which, as it seems to me considering the present condition of the College, would tend most to your advancement. You are not at all identified with my department and have devoted so little time to it since you left College that it would be no loss to you to change your plans. Of course the present matters can easily be settled if the future is made secure...."

A letter to Norton reflects Eliot's discontent in spite of its characteristic closing assertion that the scales are weighted on the happy side.

To Charles Eliot Norton

Sept. 18, 1860

... I generally experience a slight disgust at recitations at the beginning of a term, particularly at Mathematical recitations. I wish I could teach the science in which I am most interested, and in which I work during leisure hours, but at present I have four recitations in Mathematics for one in Chemistry, and I see no reasonable hope of any change. Sometimes too the smallness of College pay grinds me, particularly when I see other young fellows getting twice as much pay for less work of inferior quality. And yet the College demands so much of my time that I can do original scientific work only by working up to the very limit of physical endurance and sometimes going a little beyond it. The memoir of which you speak so kindly has been a great pleasure to me, because I enjoyed the whole work from first to last, and know that it is an unambitious but thorough and needed research. It has commended itself to men whose good opinion I value very much. The only grind about it is that I have so little time for more such work. Lest you should think from these remarks that I have some reason to complain of my lot, I may as well state distinctly that I don't know a person in the world who is happier than I am, or who has such good reason to be....

A few months later relief from the uncomfortable situation in Boylston Hall came from the direction of the Lawrence Scientific School. Professor Eben Horsford, who was the School's chemist, resigned his connection with its laboratory, and Eliot was put in charge in July, 1861. The Chemical Department of the Scientific School was not well off financially at that time, but in other respects it was independent, having no connection with the College (as distinguished from the University), and having a budget and resources in which no other department shared. Eliot gave no more instruction in mathematics, and thereafter he had his own laboratory and his own pupils.

The question who may some day be the President of the College possesses a perennial fascination for College circles, just as the question who may one day be prime minister or who may be the next nominees for the Presidency of the United States may always be counted upon to interest members of the House of Commons or of the United States Senate. At times, in Cambridge, it seems that no one can be too old, too young, or too impossible to be proposed by somebody who will, of course, have no part in the ultimate selection. This particular guesswork was doubtless as popular in the fifties and sixties, and would have been quite as futile. None the less, it is interesting to note that Eliot began to be the subject of predictions by the time he was twenty-five, for A. S. Hill wrote to him June 12, 1860, saying, "I hear that you are to be President of Harvard University, by and bye. . . ."

When South Carolina fired on Fort Sumter and the War of Secession began, Eliot applied himself to any war-work that could be done in Cambridge, such as volunteering for guard duty at the Arsenal, computing town quotas when the Commonwealth began to put the draft into effect, and instructing students in the rudiments of military drill. He appears to have initiated plans to use the Lawrence Scientific School for the training of officers in technical subjects. But what these plans were is not clear, and nothing came of them. Meanwhile there was the usual College work to do, for the truth is that the ordinary habits of the community were less disturbed than we now incline to imagine they were. There is not space here to enlarge upon this, but a significant detail may be cited. It was not until the autumn of sixty-four that Freshman registration fell off as much as it had after the business panic of 1857. To use a recent expression, the North "got into the war" slowly.

The winter of 1861–62 was made particularly difficult by the severe illnesses of both Eliot's parents. The nursing profession did not exist, and night vigils by one sickbed or the other were frequently his part. On January 29, his father died.

When the war was entering on its third year, Eliot was offered a commission as Lieutenant-Colonel of Cavalry. At that time his appointment as assistant professor had just expired, and he knew, or guessed, that he was not to be appointed professor. A stenographic report of his own account of this episode was published during his lifetime.

(As it appeared in a well-edited journal, it is probable that printer's-proof was submitted to him before publication.) "In June, 1863, I received through Professor James Russell Lowell an invitation from Governor Andrew, who commissioned all the Massachusetts officers in the Civil War, to become lieutenant-colonel in a regiment of cavalry which was just being raised in Massachusetts. Now, I had been an officer in the drill club of Harvard College from the time the war broke out, and moreover, I was very fond of horses and of riding. It was the most attractive proposition that could have been made to me, and I was disposed to accept it on the spot; but Professor Lowell told me that I had better think the thing over; that it was an important decision; and he felt some doubt whether I had any right to accept it. So I took it into consideration, and tried again to get spectacles which would give me natural vision. I was very near-sighted; and to this day I have never been able to find spectacles that would give me anything like natural vision. This physical defect had cut me off from many sports and manual occupations, and from quick recognition and responsiveness in much human intercourse. On reflection I came to fear that I could not command cavalry successfully, because I could not see well enough to direct the rapid movements that are expected of mounted troops. I should not be able to see what the country was like in front of me. Then I was forced to take up the family conditions. My wife had two young children at the time, and I was their support. My mother was a recent widow, and

had lost her property with my father's in the panic of 1857. I was her only son. My wife's mother was also a widow, and she had often told me that she wanted my help in bringing up her two boys. [One was about to enter college; the other was fifteen years old.] I was not drafted, only offered a commission. These considerations led me to decline, through Mr. Lowell, Governor Andrew's invitation."[1] Except for the bad eyesight, he possessed most of the qualities that go into the making of an excellent officer; he must have known it,and the decision must have been difficult and distasteful.

Before the outbreak of the war, Theodore Lyman had taken his wife to Europe. The following letter to him throws light on Eliot's thought and feeling at this time:

To Theodore Lyman

Aug. 5, 1861

Dear Theodore, — Vacation gives me time to write to you, as I have been meaning to do for months. The war fills up half our time and thoughts — since Sumter fell, I have not done half as much work as I should have done in ordinary times. So far I think we have felt satisfied and proud oftener than disgusted, but I have experienced three or four of the most awfully sickening sensations

[1] Reminiscences before the Faculty Club of the M.I.T. *Technology Review* (July, 1920), 431. It was probably Lowell who suggested to Governor Andrew to offer Eliot a commission. Cf. Lowell's remarks at the Commencement Dinner in 1875, quoted in E. E. Hale, *James Russell Lowell and his Friends*, 119. *Also:* "This decision cost me much distress; for I felt strongly the call of the country, a call which many of my friends had eagerly obeyed. It was a comfort to me that Mr. Lowell approved my decision." (Class Life, 1913.)

— the first was on Friday of *the* week, the first week, — I was in town, and all of a sudden about 1½ o'clk I saw everybody in the streets looking tremendously excited and black, and soon heard from strangers running along the streets that the Sixth regiment was at that moment fighting in the streets of Baltimore. Now I had seen that regiment start two days before and felt personally acquainted with them, and we were in mortal terror lest Washington should be captured by the prepared enemy before our men could get there (of course the Mass. men were the first on the track, — three tremendous cheers for Mass.) and you can't imagine how sick we all felt at the sight of that telegram in the "extras." As a strong symptom I couldn't eat any dinner. We did not know then that the City of Baltimore could be held fast by two small regiments of "damned Yankee Abolitionists" + the Boston Light Artillery. Of one act of your life you must repent, — you have laughed at the militia — apologize, repent, reform. The men left everything at a few hours' notice, took their lives in their hands, and went off to what looked like hard fighting with their absurd dress coats on. I tell you when you saw those men going by to the cars with their solemn Yankee faces, you did not know whether to cheer or cry. There was something big in my throat and I felt a creeping sensation all over to which I am not accustomed.

I saw this same militia come back two or three days ago and they looked serviceable, hardy and well drilled, though there was none of the stiffness which we have been

in the habit of expecting. Three quarters of the men and officers will return to the war for three years. Even the dandy city companies, as the 2nd Battalion, and the 4th Battalion and the Cadets have done good by giving the first principles of drill and manœuvres to men who otherwise could not have gone as officers. Said City companies however are the least commendable part of the militia. Another unpleasant sensation was caused by the repulse at Great Bethel — which was a small affair, but illustrated the lack of discipline among our troops and the inexperience of our officers from Brigadiers down. Last and worse, the defeat near Manassas made everybody here feel perfectly down-hearted and miserable. The horrible fact was that Yankee officers and men had *run*, fled in utter confusion when there was no pursuit, and the battle was two thirds won. The actual loss in killed and wounded was of no account beside this ignominious panic. Our Massachusetts [men] behaved no better than the rest.... People are too impatient — everybody talks of a short war, one year, two years at the outside. I say ten years if necessary — fight it out now once for all, *dig up* the root of the evil and let us know whether a great Republic can or cannot carry on a successful war in defence of her life and honor. I believe it can and will be done.

I have no room to tell you about family matters....

The war was an oppressive shadow that might be distracting; but the work of the Scientific School, and the question how to make it serve the needs of young men

who wanted to devote themselves to engineering and the applications of science were absorbing. Since Eliot began to teach mathematics, it had seemed evident to him that many boys were spending four years in College over studies which did not rouse and develop their faculties. He considered that the College was more or less wasting four precious years of the lives of such boys. Thus he had tried to quicken the study of trigonometry by organizing his volunteer class of surveyors; and thus again, in 1858, he had prepared a memorandum for the Faculty in which he set down the view that studies in crystallography and mathematics should be combined, partly because "experience has shown that there are some students who cannot be compelled to do anything, but who will study faithfully this applied and practical science [crystallography], of their own accord, and from a natural liking for such pursuits. It seems desirable to give such students an opportunity, at least, of improving time, otherwise wasted." These practical-minded or scientific-minded boys were the very ones who came to the Scientific School. Eliot was now in a position to do more for them than he had been able to in the College. He was in complete charge of the Chemical Laboratory of the School, and when Professor Eustis, who was a West Point graduate, left to join the army in 1862, a general supervision over the Engineering Department's affairs was also entrusted to Eliot. Throughout the year 1862–63 he served as "Acting Dean" of the School.

It is unfortunate that so little has survived to show just

what his ideas about education in the sciences were at that time. But there is a "Plan for the Lawrence Scientific School" which he prepared for its Faculty in the winter of 1861–62 and which began by proposing that the School should thereafter "provide a Course of Instruction extending through two years, and comprising a regular system of required recitations and exercises in Mathematics, Chemistry, Physics, Physiology, Botany, Zoölogy, Physical Geography, Rhetoric, French, German, & Drawing, preparatory to the prescribed studies of the special Departments of the School." The memorandum then went on to outline details down to a tabular statement of hours of recitation for all classes. It was a radical recommendation. In the first place it proposed that the School should expect a broader preparatory training before specialization began. At that time almost anybody was permitted to enroll in the School, but if a student enrolled to study chemistry he became — to all intents and purposes — a private pupil of the Professor of Chemistry; his fees supported the Chemical Laboratory; he was not supposed to study in any other department. In the second place the plan defined substantial entrance requirements for admissions to the preparatory course and proposed that they should be enforced by means of examinations. In the third place it proposed that degrees should be given after four years of study in the School, or upon proof of the completion of equivalent work; that is, after two years of broad preparation and two more of specialization in chemistry or whatever. The significance of these proposals was not obscured

by certain clauses of the plan which left the door open for special students to enroll for special work on almost any terms acceptable to their teachers. For the plan was a square challenge to the existing order.[1] But nothing came of it. It was discussed, at first favorably, then skeptically. One may imagine the arguments *pro* and *con*, but they are not recorded in the Faculty's minutes. A letter that Eliot preserved in his scrap-book reflects light on his ideas, however. It follows in part. Its author was a Harvard College graduate of 1838 who, later, was Professor of English Literature and History at the Massachusetts Institute of Technology from 1865 until 1889.

From W. P. Atkinson to C. W. E.

Mar. 20, 1862

I thank you for the pains you have taken to explain your plans to me. I am much interested in them, for my experience as a schoolmaster long ago convinced me that the opportunity to pursue some such course of study as you have marked out was very much needed by a large

[1] Eliot's draft of this plan bears the following endorsement: "I made this plan in the year 1861–62 when in charge of the laboratory of the LSS. In 1864–65 the Institute of Technology was started very much after this plan. In 1871 the Lawrence School was reorganized with a four years course in Engineering. When I came back as President in July 1869 I found this document in a drawer in my office." For a description of the condition of the Scientific School, the looseness of its organization and the laxity of its requirements see Eliot, "The New Education," *Atlantic Monthly*, Feb., 1869. Rogers, later President of the Institute of Technology, was a member of the committee appointed by the Overseers to visit the School while Eliot was teaching there. His ideas about scientific education were already matured and doubtless helped to shape Eliot's.

class of young men who either now get no good education, or are sent to College for want of any other alternative, and who find themselves quite out of place there. I cannot doubt that the excess of idleness and dissipation among the undergraduates, over and above that percentage which must always exist in large bodies of young men, comes from the *misplacement* there of a class of young men who ought to be in your School. I have had many such. . . . It is very strange that the intensely practical New Englanders should be so scantily provided with the means of preparation for scientific pursuits and for practical life. I take it for granted that the theory that one and the same training is equally good for all minds and as a preparation for all the occupations of life is pretty generally exploded; — yet, practically, a drill — better or worse — in Latin and Greek is all that is to be had in the shape of higher education. . . .

That there is a great need for a class of young men in this country who have had their training in science chiefly, rather than in literature chiefly, I feel very sure. They are needed in thousands of places which men of literary culture and habits are found to fill very poorly. . . .

. . . It is true that as things are now, a scientific is apt to be a one-sided and ill-proportioned education — and hence I suppose has arisen the prejudice [against it]. I should wish to see a well-balanced course of study adopted, and some substitute provided for the purely literary training which the study of the Classics gives. . . .

I am making a very long story. Let me answer your

question in regard to the best means of communicating with the public. I fear that, as a general rule, you will not find much help in the schoolmasters. The schools are now in gear to grind for the college. The teachers are college men who can teach the classics well, but not science. Classical school-books are good, scientific school-books hopelessly bad. The public do not make large demands except upon a teacher's classical attainments, which are apt to be the criterion of his general abilities. He is overworked and naturally devotes most of his attention to the department from which most is expected. The consequence is that a few boys get well prepared for college, and the great mass of pupils are put off with very meagre fare. The public have not begun to have an idea of what might be accomplished in the way of an *English* education by our public schools, and you will not succeed as you ought to, till they are made to do a fair share of work for you. . . .

When the year 1863 came in, Eliot had already advanced with the ordering of the Scientific School's affairs, and felt himself to be making progress in the direction of teaching his students by means of laboratory exercises. "All right — push on!" — thus he exclaimed in a note, written from the Laboratory at the opening of term, in which he informed his wife that there were three more students than ever before. "There is nothing like honesty, industry, and system."

His five-year appointment as assistant professor was about to expire. Horsford, who had previously given up

the direction of the Chemical Laboratory, now resigned the Rumford Professorship on the Application of Science to the Useful Arts. The chair had been assigned to the Scientific School since the School's inception and it had always supported the School's chemist. Naturally Eliot hoped to be appointed Rumford Professor. But in January the newly installed President of the University, Thomas Hill, brought him the disquieting suggestion upon which the following letter is a commentary:

To President Hill

Jan. 31, 1863

My Dear Sir, — I have carefully considered the informal proposition which you made to me yesterday morning. I understood your question as follows, — "inasmuch as the Rumford Professorship is not likely to be filled at present, will you accept the Professorship of Chemistry in the Scientific School with a guarantied salary of $1500, and the right to $900 more from the *receipts* of the Laboratory after all expenses have been deducted from those receipts — the fixed salary of $1500 to be considered one of the expenses?" You expressed a desire to have my reply in season for the Corporation meeting today, and I have therefore tried to state, distinctly though somewhat hastily, my reasons for thinking the above plan a very disadvantageous one for the College and for myself.

First it is disadvantageous for the College because it makes a professor's salary dependent on the fees of the

students. The whole salary is derived from the fees, the College taking the risk of part of it and the professor of the rest. The Scientific School has suffered everything from this tenure of office already, — there is not a teacher connected with the College who would not say of the system that it was theoretically unwise, and that it had been practically disastrous, and the *Corporation* has put upon its record an express vote that the *system of compensation by fees should be done away with* as soon as possible. The date of this vote was Oct. 1861, I think, but it may have been a little before or after that month. It is impossible to exaggerate the evils of this tenure of office; the past condition of the Chemical Department illustrates the evils of the system under one sort of [personal] management, the present state of the Engineering Department under another.

Secondly, the above proposition is a disadvantageous one for the College because it will prolong indefinitely the poverty-stricken condition of the Scientific School. The annual earnings of the Engineering Department are and will be absorbed in the salary of the professor and the few absolutely unavoidable expenses. If the above plan be adopted, the same will be the case with the Chemical Department and not a cent will remain for the general expenses of the school or for repairing or adding to the present very meagre equipment of either Department. At this time of utter financial uncertainty here is a proposal to burden the Scientific School with a much heavier load than it ever carried before, — to draw the salary of a

professor from a Department which till within eighteen months never met even its ordinary running expenses.

Again this plan is very disadvantageous to me personally. First in the matter of salary. I am asked to accept the same fixed salary which I now have, with a possible addition depending upon chances which in the present state of public affairs no prudent man would venture to foretell. The proposition itself implies that the Corporation would be unwilling to run the risk of ensuring any such additional compensation.

Secondly the proposed tenure is extremely repugnant to my feelings as a teacher and as a student of Science. A constant reference to the money relation between master and pupil is demoralizing to both, and nothing could be more distasteful to me than such a necessity.

I should withhold something of my real feelings, if I did not add that, in view of my past connexion with the College, I find it hard to reconcile this proposition with my sense of right, made as it is at a time when there is a vacancy in the Professorship whose incumbent for thirteen years did the very work which I have been doing for the last three terms, I trust to the satisfaction of the Corporation. The fund of that Professorship would not seem to need further accumulation for its income already exceeds the full Professor's salary. A large portion of the instruction given every year in the Chemical Department is Technological, and it would be perfectly possible to add to the work of superintending the Laboratory the delivery of a course of lectures on Technology. You suggested

yesterday in explanation of the proposed delay in filling the Rumford Chair, that additions to the corps of Professors in the Scientific School might become possible through the action of the State as recommended by the Governor; if any such expectations should be realized a new distribution of the work to be done in the School would be natural and proper, and the fact that the Rumford professorship was filled would be no hindrance to such new arrangements. I confess that I do not understand why the hope of new resources should prompt the hoarding of those now possessed.

I have tried, my dear Sir, to reply to the proposition you made me frankly but with the utmost respect; when the subject comes before the Corporation I beg that you will read this letter to the Board.

Very Respectfully Yours,

Charles W. Eliot

It is not clear whether Eliot yet realized what was behind President Hill's intimation that the Rumford Professorship might not soon be filled. Apparently Louis Agassiz and Benjamin Peirce wanted to call Wolcott Gibbs from New York, and the President had become convinced that Gibbs would bring something to the University that Eliot could not contribute. It seems that the two men were already appraised as belonging to types that are too different for any common measure of comparison. Eliot was recognized as an excellent administrator. He had served the University well and knew its

traditions and ways intimately. He was a good teacher. In those days the fact that he was a Harvard graduate would have counted in his favor. On the other hand, Gibbs, then forty years of age, had an important chemical achievement to his credit already. His education was incomparably superior to Eliot's, for after finishing his medical school course he had spent three years studying chemistry in Germany and Paris. He was essentially an experimentalist; and was both mature enough to have given proof of qualities that were to place him, in time, among the foremost American chemists of his generation and young enough to have his best years before him.

Eliot had prosecuted a few investigations that could be spoken of as independent work, but the only one worthy of remark was the "unambitious but thorough and needed research" which he described to Norton as having been "a great pleasure to him." Professor C. L. Jackson says that "it was spoken of for many years with bated breath as Eliot and Storer's classical research on the impurities of Commercial Zinc,"[1] adding — "Now, with a more just appreciation of the nature of research in chemistry it would be considered as of slight importance as a contribu-

[1] "The Impurities, etc." was printed in *Memoirs of Am. Acad. of Arts and Sci.*, N.S., VIII, 57–96 (May, 1860). Professor L. C. Newell doubtless pays it the highest compliment to which it is entitled in calling it "a model in procedure and style." He mentions three other communications, but they seem to have been slight in character: "The Amounts of Lead in Silver Coins" (*Proc. Am. Acad. Arts Sci.*, V, 52 [1860–62]); "Difficulty of Removing the Last Traces of Carbon Dioxide from Large Quantities of Air" (*ibid.*, 62); "On the Chromate of Chromium and Analogous Chromates" (*ibid.*, 192). *Vide* L. C. Newell, "C. W. Eliot, Chemist," *Industrial and Engineering Chemistry*, XVI, 636 (1924).

tion to chemistry, but a pathetic and creditable attempt at a research by men without proper training and facilities." There was, to be sure, a certain timeliness about these labors, for chemistry was then mainly concerned with inorganic problems; methods of analyzing ores and alloys and determining mineral constituents still had to be devised and naturally enlisted the interest of chemists like Cooke and his pupils. But there was nothing about Eliot's investigations to suggest that he had the instinct that guides men to scientific problems that are significant and fundamental. If we review his chemical training — and at this point we are led to do so — its inadequacy appears only too clearly. His only teacher and model had been Cooke, for Storer had long counted as a fellow pupil and co-worker rather than as an instructor. Cooke was hardly six years his senior and had taught himself chemistry under very unfavorable conditions. His interest in the subject had been aroused while he was an undergraduate by a course of Lowell lectures that Silliman delivered in Boston. He then got up a rudimentary "laboratory" for himself in the shed of his father's house in Winthrop Place, Boston, and began to learn chemistry much as many boys now learn about electricity by fussing over a radio set. In 1849, a year after his graduation, he was appointed Instructor in Mathematics in Harvard College, and in 1850 was asked by the College to give lectures on chemistry to the Freshmen. At that time the only laboratory he had worked in was the shed just mentioned, and the only apparatus at his command was what that boy's

workshop contained.[1] The College gave him neither apparatus nor chemicals, but allowed him to set up what he could afford to buy in a corner of the University Hall basement next the College bakery. There was no gas in the basement and neither the chemist nor the baker had running water. (In fact both pumped their water from a well close to the privies that were used by the whole College.) To this primitive laboratory Cooke admitted Eliot, then a Freshman, as his first volunteer pupil, and Eliot pottered about under his eye. The next year Cooke was appointed to the Erving Professorship of Chemistry. Thereafter, except for six months' work under Regnault in Paris, he went on with his Harvard teaching without ever enjoying more than a calling acquaintance with any laboratories except his own (although it should be noted that his own became a very good one when Boylston Hall was built in 1857). He was a popular lecturer and writer and in the end it was perhaps his greatest achievement to have created a teaching laboratory and a department of Chemistry in Harvard College as early as he did, and thus to have established his subject upon a parity with the cultural disciplines in an American college. His belief that science should occupy a more important place in the colleges, and his ability to impart some of his enthusiasm to others should be recalled while his connection with Eliot is under consideration. Although Eliot continued to enjoy the privilege of using Cooke's laboratory, we have

[1] See quotation from Cooke in a *History of the Lowell Institute* by Harriette K. Smith (1898).

seen that from 1854 to 1861 he was mainly engaged in occupations of other kinds; that in 1860 he had complained of having four times as much teaching to do in mathematics as in chemistry; and that at the end of that year Cooke told him that he had spent so little time on chemistry that it would be no loss to him to give it up.

At the age of twenty, Eliot had announced the intention of being a student of science as well as a teacher. How came he, therefore, to have contented himself with so meagre a preparation? If a strong love of science was, indeed, stirring in him, why had he stayed in Cambridge teaching trigonometry instead of going abroad to places where the opportunities to study chemistry were incomparably richer? Until 1857 money would have been no obstacle and until that year there were no family obligations to tie him down. It will not do to dismiss the question by saying that the whole case was perhaps less significant respecting Eliot than it was symptomatic of the ignorance and juvenility of thought respecting scholarship and science which then prevailed in America. For he grew up in an exceptionally enlightened circle and saw good examples before him. His father had spent two years in foreign study after graduating from the Divinity School. His uncle by marriage, George Ticknor, had been one of the first Bostonians to visit the European universities, had convinced himself of their immense superiority, and had been convincing others of it ever since. Among men more nearly his own age a small but ever growing procession of would-be physicians, sur-

geons, and scientists was headed for Germany. Storer went over in 1855. Eliot's later career was identified with the thesis that young men should be trusted to know what they needed. Did he himself not conceive what a good scientific education would be? Or, at least, did he not perceive that his own was a very poor one and that it might have been better? — Or was chemistry not much more to him than a subject which, among possible other subjects, he preferred to teach? Did he not care so very much for science itself? And was he disposed to think that a life devoted to a variety of useful tasks — which need not be specified in advance — would be most satisfactory to him? That would have been a natural enough result of his having grown up in his father's house. Or, finally, had he felt all along that it was his true vocation to concern himself with the art of teaching and with administrative labors? . . .

But we must return to the practical question that lay between Eliot and President Hill.

It would seem that nobody wanted to push Eliot out of the University; certainly Hill did not. But there was money in hand for only one salary, and Agassiz and the elder Peirce were insistent that Gibbs rather than Eliot possessed the desirable qualities.[1] A skillful president might have overcome the financial difficulty. But un-

[1] That Eliot's limitations were suspected even by his students appears in a letter that William James wrote shortly after he began to study in his laboratory in 1861; "I don't believe he is a very accomplished chemist, but can't tell yet." (*Letters of William James*, 1, 35.) There is no doubt that he was an excellent teacher and that he was respected as such.

fortunately the Reverend Thomas Hill was as feeble an executive and as little a man of the world as any who ever presided over Harvard's affairs. Ministers are commonly thought to be unpractical; so too are mathematicians. Hill was a Unitarian minister with a touch of genius for mathematics.

His problem being to provide for a Professor of Chemistry who should not occupy the Rumford Chair, he began by making the mistake of inviting wealthy members of Eliot's family connection to subscribe enough to guarantee a salary for him for a few years. This naturally roused Eliot's pride and indignation, and he notified his relatives promptly that he would have nothing of such an arrangement.

To Arthur T. Lyman

Feb. 17, 1863

. . . I do utterly object to receiving any salary which is raised by subscription *for me*, directly or *indirectly*. I shall decline any such proposition. I want a professorship on the usual salary, paid in the common way. My objection holds against any *temporary* or *unusual* expedient whatever, but not against the raising of a permanent fund which would be a lasting addition to the resources of the University. . . . I wish that the President and Corporation would make their choice between the two men without attempting this highly objectionable subscription. I'll agree not to quarrel with their decision in any event. . . .

Money for the endowment of professorships was hard to

come by in 1863, however, and President Hill was not the man to awaken enthusiasm for a difficult undertaking. But he could not reconcile himself to the choice that lay before him. He asked Eliot to consent to finish the current academic year, although his appointment expired in March; and then he kept nibbling at the situation, bringing forward futile or irritating projects as alternatives to the Rumford Professorship. One day Eliot received a note from Judge Hoar asking him to come to the College Office. Hoar was then a member of the Corporation who carried great weight in its counsels. Eliot found the President there too. Judge Hoar, evidently drawn in for the rôle of persuader, spoke kindly and to the effect that he did not understand Eliot's reluctance over what seemed a good proposal. Eliot rehearsed his reasons and incidentally remarked that he had explained them to President Hill when the proposal was first made. Thereupon Hoar exploded upon Hill as he might have upon an unruly witness in his courtroom. "Do you mean to tell me, sir, that you knew of Mr. Eliot's conclusions three months ago? — What do you suppose the Corporation are here for? — I've done with the whole business, and I am not going to be bothered in this way again!" There was nothing for the President to say. Out stalked Judge Hoar, leaving the two embarrassed men to their unspoken reflections.[1]

[1] It is a fact, although it may have no connection with this incident, that Judge Hoar resigned from the Corporation shortly afterward. There is no doubt that his contemptuous manner to the President of the College made a painful and ineffaceable impression on Eliot.

Meanwhile President Hill began to say that he thought the Rumford money could not legitimately be applied in the Lawrence Scientific School anyhow. In May he wrote Eliot a note that looked as if it were worded for the records and intended as a prelude to an adverse decision. Eliot replied by writing a letter to the Corporation in the course of which he told them that a decision to deprive the Scientific School of the Rumford Professorship would, under the circumstances, cripple it disastrously. The carefully labored draft of this letter, which he preserved, looks as if he believed that Hill, and perhaps other members of the Board to which it was addressed, had not even yet justly apprehended certain important facts about the School's condition. Anyhow, the subsequent votes of the Corporation showed that it could not escape the logic of his contention. "... The Corporation," said President Hill in his annual report, "was forced through want of funds for the chemical department [in the Scientific School] to assign it again to the care of the Rumford Professor." But on June 12, it voted to appoint Wolcott Gibbs to the Rumford Chair. "And thus," added Hill, "the University lost the services of Assistant Professor Eliot whose administrative talent has been, in various departments, so valuable to the University." The decision was a shock to the habit of orderly promotion, although it may have been a wise one if the advancement of pure science at Harvard was the main consideration.

And so we see that before Eliot came to the presidency, he had been caught in a typical academic dilemma him-

self, and had been the victim of a decision that sacrificed both routine and something better than ordinary merit in the particular man to a quest for unusual scholarly distinction. It is also easy to see that his retirement and the events connected therewith raised a flurry of discussion. His qualities and what he had accomplished were better advertised than if they had not been publicly doubted.[1] He began to have a reputation, although he had lost his post. This is illustrated by a letter from Professor George J. Brush of the Sheffield Scientific School at Yale, in which he wrote to J. D. Whitney:

Geo. J. Brush to J. D. Whitney

New Haven, *June* 30, 1863

. . . Our good friends in Cambridge have been kicking up a curious shine and have got things rather "mixed" as Ashburner says. — The Agassiz-Pierce-Gould party have succeeded in having Wolcott Gibbs appointed Rumford Professor. I suppose you knew that Horsford had re-

[1] The questions and comments which these events stirred up may have produced an impression that helped Eliot in some quarters when he was nominated to the presidency to succeed President Hill. But the story that Mr. John A. Lowell, then the leading member of the Corporation, said to him, "Never mind; you will be President of Harvard some day," is hardly to be believed -- at any rate, in the form in which it is repeated. Though such a remark may very well have been made by somebody, it would hardly have come from a member of the Corporation who might have to help select the next President, and least of all from such a discreet keeper of counsel as John A. Lowell. Since Lowell has been mentioned in this connection, and since he undoubtedly did have much to do with three subsequent offers of positions to Eliot — the last one being the nomination to the presidency — it is interesting to note that he was absent from all Corporation meetings at which the Rumford Chair and Eliot's position were discussed. He was in Europe.

signed. This of course would be a most excellent appointment were it not that it has one great drawback, namely, that in order to secure it they compelled Eliot to resign. Eliot you know has been in charge of the Lawrence Laboratory for the past two years and has brought it up from a losing concern to be at least one of the best laboratories in the country. He is a fellow of fine talents and a wonderful amount of administrative ability, and I think he has been most shamefully wronged by the Corporation of Harvard. He was supported as a candidate for the Rumford Chair by President Walker and all of the Faculty with the exception of Agassiz, Pierce and President Hill. I am really sorry that Gibbs should succeed to the place under such a cloud, although I do not doubt he will meet with hearty coöperation if he manages rightly when he goes there. Of course he can know nothing of Eliot's relations to the place or he would not accept it. Everyone, almost, considers that Eliot fairly earned the place. I am afraid E. will be obliged to cut chemistry and go into business in order to earn a livelihood for his family.

The severance of his connection with Harvard under the circumstances that have been outlined was a bitter disappointment to Eliot — probably the greatest disappointment of his life. He had said to Theodore Lyman five years before, "I for one want to be pretty well in front when we near the goal." This virtual dismissal wounded his pride, and checked his career. How should he go on? No position comparable to the one he had lost was in

sight. He might, by using his little capital or by borrowing, wait for two or three years; but he could not wait indefinitely. For a few weeks he thought of going into business. On the other hand, the war made everything seem uncertain, and good opportunities to teach and pursue science might present themselves when it ended. It was not the time for a man of fortitude and sanguine temperament to turn aside from his vocation. At this most opportune moment a bank in whose shares Eliot had invested the remnant of his grandfather's legacy declared a hundred per cent dividend. He saw that with the aid of this windfall and a small sum that he could borrow, he might take his family abroad and spend one or two years visiting European schools and universities and learning about their constitution and methods. He might also study chemistry in some German or French laboratory. None of his colleagues wanted to see him abandon his profession, and Theodore Lyman, who had come home from Europe and was about to enter the army, did all that Eliot would let him do to facilitate and encourage his departure. "Nothing," wrote Theodore Lyman, "could be more sensible or philosophical. You would expand more than you even dream of, and you would come back, with only 30 years over your head, a young man, just well set up to begin life seriously." A. S. Hill had said that Eliot "had a sunbeam to keep house for him," and his wife was ready for the adventure. So the decision was made. "I am going," he wrote to Arthur T. Lyman, "very sorry to leave Cambridge in just such a way, but

with a feeling that if I succeed in overcoming this present difficulty I shall be a good deal more of a man than if I never met it."

Of three sons who had been born in the Kirkland Street house, the second had died in 1861. There were, therefore, two children, "Charlie" in his fifth year and "Sam" in his second year. So it was a family of four, plus a nursemaid, that embarked for England at the end of September.

CHAPTER IV

1863–1865

A winter in Paris — Letters home — Studying the organization of French institutions — A summer of travel — A winter in Germany — Trip to Italy — Rome and Lincoln's assassination — Offered superintendency of the Merrimack Mills — Accepts a professorship at the Massachusetts Institute of Technology — Last letters from England

If an anticipatory reflection is allowable, it would be to the effect that two years of experience in Europe at about this time should have been an admirable preliminary to the half-century of active participation in educational and other reforms that lay ahead for Eliot. It was the period of the Second Empire in France; Germany was the old Germany which Bismarck and his contemporaries had not yet converted into a very different political and social organism. England, which had outraced every other country in the use of coal, iron, and steam, could show how vastly dislocating to the old order was the coming of the mechanical age, and she was just beginning to cope consciously with some of its evils. Eliot was in time to see with his own eyes the conditions that preceded great changes.

After landing, his little party paused in London for a few days and then crossed the Channel. They reached Paris on October 20 and remained there until May 31 of the ensuing year (1864). By way of definite detail, they lived in an apartment at 4 rue des Bassins until March,

and then moved out to another apartment at 21 rue Pauquet de Villejust.

As soon as he had found quarters for the family, Eliot set himself to the task of visiting institutions of learning and schools, and inquiring into their organization and methods. One week it was the Conservatoire des Arts et Métiers, where he attended lectures, "studied the audiences," looked up the subjects treated, and took notes on the methods of instruction.[1] Another time it was the Institute, or the École Centrale, or the library of the Sorbonne, to see it and ask questions and look up "the laws and regulations relating to public instruction." [1] "Next," he wrote, "I shall take the Jardin des Plantes and see what that is and does." [1] His purpose was to acquaint himself with the system of public instruction "from the minister down to the primary school teacher and to understand" — as he puts it in a letter to his mother — "how it is that France supports such a large body of scholars in every department of knowledge who not only teach but also find time and means to prosecute actively new researches, new investigations in every field of thought." [1] Ere long, having learned much of what was accessible to the general public, he had himself presented to the Minister of Instruction and other officials and obtained permission to visit Lycées and gather data about salaries, expenditures, and administrative details. He was greatly impressed. "... None of my friends talked

[1] To Mrs. S. A. Eliot, November 13, 20, December 3, 10, 1863, arranged out of sequence.

strongly enough," he wrote on the 20th of November, "about the necessity of my going abroad, not even Anna Mills — Mary Parkman came the nearest to it. I feel now that it is perfectly absurd for a man, who wishes to excel in the profession of a teacher, and who can scrape together money enough, not to pass some considerable time in these old countries where they are as much in advance of us in all that pertains to the higher education, as they are in the fine arts, in architecture, or in the more delicate of the mechanic arts...." [1]

In December these occupations were interrupted because the Eliots' boy, Charlie, contracted typhoid, and at New Year the case looked so bad that Eliot's weekly letter to his mother betrayed the anguish of his spirit. He thought there was little hope. "It is very hard," he ended, "to send you such a week's suffering as this letter must prove. Pray for all of us, dear Mother, that we may have strength to bear God's will. We find here much sympathy and many kind helpers, but our thoughts turn constantly to home. With a heart full of pain and love and prayer, I am always, Your son." The ensuing month was an ordeal of mortal anxiety, for the child hovered between life and death during days on end, and the American nursemaid came down with the infection. Eliot and his wife relieved each other in day and night vigils. But finally both patients began to recover and Eliot breathed a sigh of thanksgiving, adding, "I understand myself and human nature better than I did."

[1] See preceding note.

The experience served to widen his field of observation. He found himself dealing with French doctors, landladies, servants, and trades-people over matters that might have appeared to be far enough removed from his educational inquiries, but which none the less excited his unflagging curiosity. He cross-questioned his doctors about their education, their hospital services, their fees, their ages. He was curious as to the apothecaries and observant of the ways of the little French shopkeepers. "... In my third Pharmacie," he wrote to his mother on January 28, 1864, "was a man of 45, his wife, his two apprentices, a child or two visible and one invisible. Madame here too took the money, kept the books, and overlooked things generally. People generally send a servant to the Pharmacie with an order — I used to go myself, except when C. was the sickest. When I enter a shop I take my hat off and say *Bon jour* or *soir* as the case may be — Madame or Monsieur responds *Bon jour, Monsieur. Qu'est ce que vous désirez, Monsieur?* I produce my prescription or state my want. I am requested to seat myself, which I generally don't do, that I may the better observe what goes on. A bottle or package is always tied up and sealed so that it can't be opened without breaking the seal. I pay Madame, take my hat off again and am bowed out by the party who has put up my medicine; he wishes me *bonsoir* and shuts the door after me. The prices are in general not so high as apothecary's charges with us. I asked the oldest apprentice how many hours a day he worked, being moved to this inquiry by finding him al-

ways in the same place at all hours of the day and evening. He said he worked from 7 A.M. till 11 P.M. and was liable to be called up, by persons coming for medicine, every other night. Between 7 A.M. and 11 P.M. he had 1½ hours for his meals...."

Such quotations might be multiplied; but a few must serve to convey an impression of all. They may, it is to be hoped, help to raise up before the mind's eye of the reader an image of the tall young man who went about the Paris of the Second Empire asking questions all that winter. His figure could easily be recognized as presenting a British type; and yet his little side-whiskers, his spectacles, his sober-colored American clothes, and the special quality of his reserved manner were not rightly English. His gravity was a bit stiff, his ceremoniousness quite inarticulate; but any Frenchman could see that he was inspired by a polite intention, and when he spoke, his voice was as true as a note drawn from a fine old 'cello. He struggled rather lamely with the difficulties of the language, but never, under whatever provocation, gesticulated. He must have seemed formidable at first by reason of his six feet of impenetrable exterior, his scarred face, and his unfathomable foreignness. One might not know how to place or define him, but he was — no one would doubt it — authentically somebody. As such he was entitled to consideration. So he got along very well. It was true that he put questions that were as simple and surprising as those of a Chinaman; but then he pleased the functionaries by being curious about the

little duties which absorbed them from year's end to year's end, and which no outsider ever asked them to explain. Whether in a lecture-room at the Sorbonne, or the kitchen of a boys' school, or the bureau of an official, or on the top of a 'bus or in a shop, the same insatiable appetite for well-defined details was always being manifested. Details of almost any sort. "I give you what I hear on the tops of omnibuses and in talks with workmen, which I make a point of having whenever I get a chance." Thus to C. E. Norton, who was editing the "North American Review," and who had asked about the subject of lodgings for the poor. Eliot promised to inquire into it further for him, but refused to write an article, for that would consume time that he could "more profitably devote to observation." After years of such complete preoccupation with college and other business that his time for study and reading had been short and "as it were stolen in a hurry," it was a joy to be a student again. "The process of acquisition is delightful," he exclaimed. — And clearly the process went on continuously and everywhere — especially where he could ask a question. A house was building in a street through which Eliot chanced to pass. Up the ladders he mounted until he found workmen laying floors, and them he questioned. An "original," those same workmen may have thought him; but they answered him fully. That evening he wrote his mother a page about the way floors were laid in France — not, so far as one can discern, that Mrs. S. A. Eliot cared a straw about the laying of floors in Paris or

Boston either, but because French floors had occupied a part of his day and because a letter should record the writer's little doings and experiences. He wished that his mother would be more observant of that maxim in writing to him; and he told her so.

Meanwhile he posted his weekly records of his own occupations to her, and thus, by implications more often than by explanations, informed her, and us, what he conceived himself to be interested in and what aspects of the foreign society that was functioning and stirring all about him spoke to his intelligence most sharply.

C. W. E. to his Mother

PARIS, *March* 11, 1864

... I wish I could give you an idea of what I am learning here. An example is the best thing. Yesterday I went into the entering office of the Lycée Napoléon, opposite the rear of the Pantheon, and presented my card to the concierge, an old fellow in uniform; he read it aloud but did not see the point, — another man standing in the office however heard the name, took the card, remarked, Ah! Monsieur Eliot (no *t*); par ici, s'il vous plaît, Monsieur. And he escorted me straight up to the office of the Proviseur (which corresponds to our President). I was expected — the Minister of Public Instruction writes to the Vice-Recteur of the Academy of Paris (he is the chief man of all the institutions of Paris) that I am authorized to visit all the Lycées and Colleges of Paris. I called upon the Vice-Recteur and told him what establishments I

wanted to visit, and he sends a letter to each establishment, telling its principal to attend to me. The Proviseur was a white-headed respectability, extremely affable and polite. He asked what I wanted to see more particularly. — Everything, I said — the whole system in its details. After some general conversation about the Lycée and about America he sent for a man to accompany me about the establishment. This individual was a sort of head-clerk in the money department who had been 15 years in the Lycée and was familiar with all the details. He was with me nearly three hours — showed me the buildings — the dormitories, dining rooms, studies, class rooms play-grounds, kitchen, laundry, store-rooms, offices — gave me copies of the printed forms which are used to facilitate the business of the Lycée — told me about the food, the washing, the linen, the hours of study and meals, showed me the bills of fare, the wine, the hospital, the laboratories, the library, the collections; gave me many details about the discipline and presented me with copies of the printed permits which are used, — showed me the records which are kept by the Proviseur, the doctor, the professors, the maîtres d'études. A large Lycée, like this one, is a complicated affair — there are 700 pupils from 8 to 18 years old, of whom 500 are fed, slept, washed, dressed, exercised, taught within the Lycée. Now I saw everything in the Lycée from the mending of the stockings to the collection of chemicals, and when you consider that it is a Government school and that everything is done in the most approved manner and with great success (the

system being taken for granted), you will see that I learn something. I did not have time yesterday to examine the system of accounts which my instructor desired to show me; but either at that Lycée or at one of the others which I propose to visit I shall study up the accounts. Some of the customs are decidedly not to be imitated — for instance they change the boys' shirts twice a week, but they sleep in their day-shirts; the sheets are changed once a month! Another example — I am going today to the free school of drawing and modeling which is connected with the Conservatoire des Arts et Métiers — I was there on Tuesday to see the instruction in drawing, coloring, and modeling of ornamentation i.e. for bronzes, plaster-work, figures, wall-papers, gas fixtures, &c. — today I shall see the instruction in machine-drawing and in architectural drawing. When I go to such places I find out how many pupils and teachers there are, how much it all costs, where they get their copies and models, how they accommodate the pupils, i.e. what furniture the school requires, how long the instruction lasts, &c., &c....

He later visited the Lycée again to listen to lectures and classes.

To the Same

PARIS, *April* 10, 1864

... It need not be said that the Catholic Church is not partial to primary education, and yet in France it supports Schools whose competition with the lay schools is of great value to the cause of education. I have seen to-

day a large boys' school of 450 pupils kept by Les Frères de la doctrine Chrétienne — an ecclesiastical association, though the members are not priests. It was better arranged and furnished than any lay school which I have seen and had more teachers in proportion to the number of boys than I have seen elsewhere. Also the brothers were much cleaner and more refined in their appearance than the majority of lay teachers. Afterwards I visited a large girls' school kept by the Sœurs — it was by far the pleasantest looking girls' school which I have entered. The Sœurs looked clean and pleasant and good, but the little girls were drinking in Catholicism at every pore — their reading books and copy books were little else than prayers and litanies and sacred history seen through some Abbé's spectacles. In each room was an altar with plaster images and porcelain flowers. The preparation for the first communion was their chief end — the good sister who conducted me took special pains to show me the exercises the girls wrote in preparation for this the second rite of the Church. Four rites a French child and man observes — baptism, first communion, marriage with the sacrement, and the extreme unction. The first the parents do for the child, the second the teacher, the last the relatives standing by. The marriage rite one does of one's own will. A man will pass for a Catholic who has observed these rites, though he never enter a Church for any other purpose. As the frère who showed me over the school said — the Irish are good Catholics — the French are not, especially the men. It is rare to meet a French-

man who is a hearty believer. The great majority live, as my friend the Director said this (Tuesday) morning, dans le vide, i.e. they have no faith at all. When I asked him why they suffered their children to be brought up in a Church which they had no belief in, he replied — would you have a man bring up his children without any faith, because he is himself so unfortunate as to be a sceptic? He says — I will bring up my children as I and my fathers were brought up, Catholics — if they remain Catholics, tant mieux, if like me they lose all the consolations with which this faith (which for me is false) encompasses our life — tant pis. If I had any positive belief to substitute for Catholicism the children should know that belief, but I have nothing but negations — a moral vacuum. So the boys become sceptics and the girls Catholics, but as the director said, French women have *no* moral sense, absolutely none (Thursday). Which reminds me of Molly Bullard taking a bunch of flowers from the Easter table. Since I have been in a Catholic country I have been much struck with the fact (notorious and patent here) that the love of a place, of a form, of an image, of an altar, of its flowers, furniture, decorations or implements, has nothing whatever to do with a moral life, with religion properly so called. The Churches here are thronged with women — they follow the mass, — they kiss the very steps of the altar, they kneel in the confessionals, cross themselves with holy water, and go out into the streets better?? As my friend says they have no moral sense. They don't lead good lives, but they have the sweetest associations with

their Church, and they love the flowers on the altar and the little wooden image which they kiss as they go out of the vast, dim, old, beautiful House of God. Perhaps they feel His presence there, but they feel it nowhere else in the world. When a woman or a child associates religious ideas with a particular building or with the dress, face, and manner of a priest, religion becomes localized. God is in his holy temple, and He is *not* in the streets, in the shops, in the home, in common life. For me the utmost simplicity of worship is better than any and all attempts to make the beauties of flowers, or music, or architecture, or art, or ceremonies inspire and develope the love of God. The Catholic Church does these things to perfection — did we not see the altar at the Madeleine, Good Friday night, superbly decorated with the costliest flowers, candles, gold and silver vessels, and gorgeous hangings, and an idolatry at the foot of the altar no better than that of the Feejee Islanders. I say let children learn to see God in nature, everywhere, not in a Church or a rite only or chiefly. Nevertheless human nature requires times, seasons, and observances — the question is one of degree....

The making of discriminations marks progress. In the light of that verity and of what has been quoted, it is fair to glance back. Very promptly after arriving in Paris, Eliot had written that "the French are a most interesting and admirable people with two horrible defects — They have no religion and no family life." He was no longer seeing things in quite such simple terms. But the Puritan

in him stood intractably hostile before the whole ecclesiastical manifestation. What might be comforting to the poor woman on her knees before the holy altar was a mystery with which his sympathies were unable to commune; what would have been utterly incomprehensible to her, namely, a rational approach to the idea of God and a consciousness of personal freedom in making it, was what filled him with a sense of spiritual ennoblement. Living in a Catholic country for the first time in his life, Eliot was continually being thrown back upon his thoroughly ingrained Unitarianism. His religious posture — for Unitarianism is, among much else, the vindication of an approach and attitude — was a vital necessity to him. By negations or in positive terms his letters asserted it again and again. For example, a postscript entered at the bottom of a letter to his mother dated April first, sixty-four:

"Unitarianism is considered by the vast majority in these Christian countries as equivalent to atheism. No degrees of Unitarianism are admitted, thought of any account. All Unitarianism is so black, that a true believer cannot see the shades of difference. Now to my mind the grand principle of Unitarianism is freedom of thought. When therefore New England Unitarians denounce Renan or Parker, as the Archbishop of Paris or Canterbury might, it seems to me that liberal Christianity is grievously wounded in the house of its friends. Holdfast Freedom — then your own opinions."

The days that brought him so many new impressions

were filled with delight. "I feel," he wrote as the winter waned, "almost ashamed sometimes of my enjoyment of living here, but the fact is that I do enjoy myself very much indeed — so much that the idea of going away is decidedly unpleasant." His mother, and perhaps others at home, replied to these reports by inquiring why he was not devoting more time to chemistry. This provoked him to a letter of which a half must be given here. Having explained that there were other places where he could study chemistry better than in Paris, he tried to make what was absorbing him seem significant to her.

To his Mother

April 20, 1864

... What then is to be learned here? France has contributed greatly to the rapid development of physical science within the last 80 years — she has brought forth of great men, a few, and of moderate men, a great number. French chemists, physicists, naturalists, doctors, surgeons have done great things, and France has applied in her industries the discoveries of her savans. Why has this come about? What is there in the temper and organization of the nation which produces these admirable effects? How is such an institution as the French Institute possible? Its soil, its heavens, its physical circumstances in general, do much to determine the character of a people, and he is presumptuous who undertakes to dogmatise too positively about the causes whose working has produced any national character, French, English, or Ameri-

can. One may speculate about the causes, if he pleases, but one can see the effects. Its institutions of education characterise a people as well or better than any other group of its institutions. From these institutions, well understood, you may learn whether a nation is aristocratic or republican, bound or free, old or new, lively or stagnant, whether the professions and industries are free or hampered, what is the religious faith of the people, and what are its social habits. I believe I have learned what kind of an education a French laborer, shopkeeper, merchant, lawyer, doctor, professor, engineer, mid-wife, school-master, school-marm, apothecary may be expected to have received....

It is necessary to know how the profs. live, what salaries they have, how much leisure they enjoy, what inducements are presented to them to encourage scientific labor. (They don't live as we do; I tell you — Agassiz knew which side his bread was buttered when he declined to go to the Jardin des Plantes — the professors' houses and apartments are small, old, gloomy, tumble down affairs in comparison with which his present residence is a palace.) In the next place, scientific activity is organised into societies of every description — chemists, engineers, economists, geographers, naturalists, all have their societies and generally their periodical publications. I have inquired into the organisation and plan of these associations. Last Sunday for instance I attended the meeting of the Society of social economy and heard a description of the life of a small farmer in France by Cochin (the man

who has written about slavery in America) and a discussion on the best means of establishing popular libraries in the villages and small towns. It is very curious to hear intelligent and benevolent men discussing earnestly subjects which have been practically settled generations ago in our own country — obligatory instruction for example — and to have the American solutions of the questions utterly ignored.... But what are the applications of all these things at home?... [A page of generalizations follows, and is here omitted. Then the first person singular is resumed.] I have given special attention to the schools here provided for the education of young men for those arts and trades which require some knowledge of scientific principles and their applications, the schools which turn out master workmen, superintendents, and designers for the numerous French industries which demand taste, skill, and special technical instruction. Such schools we need at home. I can't but think that a thorough knowledge of what France has found useful for the development of her resources, may some day enable me to be of use to my country. At this moment, it is humiliating to read the figures which exhibit the increasing importations of all sorts of manufactured goods into America. Especially will it be the interest of Massachusetts to foster by every means in her power the manufactures which are her main strength.

Consider also the extraordinary contrast between the American society in which I lived to the age of 29, and this France, with its past catastrophes, its present strug-

gles between a repressive government and a population aspiring to a liberty which it does not comprehend, between Catholicism and freedom of thought, between a theoretical democracy and an actual, inherited organization into castes. I never knew anything about Catholicism before — I can't help thinking about it here; I grew up among a people who had enjoyed the exercise of liberty for two centuries — it is impossible for me not to be greatly interested in the difficulties and extraordinary proceedings of these European Governments whose utmost concession to the rights of the peoples is Napoleon's preface to the imperial decrees — "By the Grace of God *and* the will of the French people." The contest between the Catholics and the Protestants is very interesting, as are also the quarrels among the Protestants themselves (Coquerel fils), and these subjects are involved directly or indirectly in all public and social questions. In short a not too young man was suddenly transplanted from a quiet and very peculiar community into a whirlpool of strange things and stranger ideas....

In March, Eliot's sister Catherine and his wife's sister Anna came over and swelled his party to three women, a maid, and two small children. At the beginning of June they all left Paris, and Eliot noted with gratification that the weight of their combined van-luggage was one hundred and sixty kilos, whereas they were entitled to free carriage for one hundred and sixty-five. For the next four months he piloted them along the well-worn itinerary

that winds through Switzerland, the Rhineland, Belgium and Holland to London. His letters became a traveler's journal.

"Tell Storer," he wrote from Giessbach, "that I am taking a vacation from savans and schools and devoting myself to the observation of travellers, mountains, glaciers — and — manure heaps considered as savings banks and domestic companions."

Unfortunately the observer who saw so many details was often a dull reporter. In his mental universe all facts were free and equal; in his memory each preserved its own often meagre-seeming integrity. Why his mind had collected some particular item he did not often say. Perhaps he could not have told, or would have said simply "for some later need." He was very able to turn observations to fruitful uses, as any one who knew him would testify; and yet, at the moment of experience, he did not discriminate between what would be flat commonplace to his correspondent and what was worthy of communication. Thus in one letter from Paris he informed his mother that he had taken a Passy omnibus at the Place de la Bourse at two-fifteen, had got off and walked across the Bois to a field where there was to be a military review at four o'clock, and then: "Saw the Emperor received by three old Marshals of France (at about 20 ft. from me), saw the review, the departure of the Emperor and Empress on horseback. Walked home three miles — for ¾ mile the Emperor was in the middle of the street and I on the sidewalk, also I walked several rods close beside the

Empress on horseback. Got home to dinner at 7 o'clk." And that was all! Yet at twenty feet Eliot's eyes, aided by spectacles, could see enough for a better letter. If one had asked him what Napoleon III looked like, he would have been more likely than not to produce a description of the Emperor, of the three marshals of France, and of the young Empress Eugénie, all very circumstantial. What is more, he could probably have done it after an interval of fifty years. But it would have been a simple recital, not a consciously composed word-picture. Visual images were preserved in his astonishing memory as was everything he took in at all. But his memory embalmed such impressions naked and not in winding sheets and wrappings of reflection and comment. Doubtless he meant that his letters should give pleasure, but beyond the observance of his maxim that detail makes for interest — which truly reflected the habit of his mind — he was quite innocent of the art of selecting those that should be entertaining. As a consequence, the occasional unconscious revelations of his temperament are the most interesting passages in his letters. He might recognize a Gothic church as a "vast, dim, old, beautiful House of God," or admit that mediæval architecture was picturesque, but before he had done with it, his glance became skeptical and he judged it like a Yankee utilitarian.

"... I am beginning to think that our way of building for the present generation only is the best way." — Thus from Interlaken in July. — "It is not well that a house should last a century — it becomes unsuited to the im-

proved habits of succeeding generations. The same is true of public buildings." Similarly he opined that "Cathedrals are bad things — they are infinitely costly, they inspire feelings of superstitious awe in ignorant minds, they are magnificent theatres for the ceremonies of Catholicism, and when a people abandon this idolatry, these huge temples are of no use for rational worship, being adapted only for performances which address the eye, not the ear. At Lausanne, and Geneva, and Basle we saw catholic cathedrals converted into protestant churches — they were magnificent churches, but very ill adapted for any service in which it is important for the worshippers to hear and understand what is said..."

By September 7, writing to his mother from Düsseldorf, after fourteen weeks of travel and sight-seeing he concluded: "I was agreeably disappointed in the Rhine — have rather a surfeit of churches, but am still hungry for pictures and antiquities in Holland and Belgium. Ruined castles are good to look upon — picturesque, and one form of oppression is dead. Ehrenbreitstein however is modern — we visited it in a rain on Monday morning. Kate writes that I have become a radical. I don't like to see women shovelling manure for 20 cents a day — nor do I believe that the Duke of Baden is Duke by the Grace of God, as he himself states. Moreover Catholicism is much more abhorrent to me than it was before I had seen the manner in which it has cursed and is cursing humanity. Good night. It's 11 o'clk."

The party devoted a week to the Low Countries, and

before seeing Kate Eliot and Anna Peabody embark for home, they all spent three weeks in London.

Delicacy toward strangers is not what distinguishes the ordinary Englishman's public deportment; Eliot had never felt that the scar on his face was being stared at as it was in London. This rudeness and the poverty, debasement, and brutality that everywhere met the eye in the sixties, shocked him. He reminded himself that England's "very sacred regard for the liberty and rights of each individual man, woman, and child," and her respect for justice, were "comforting traits," but he thought the English the most ignorant and uncivilized people he had ever seen, "if you except the poor whites and slaves at the South." There were Southern sympathizers everywhere. His Unitarianism had to be fetched out more promptly than on the Continent; when it had been avowed, the temperature of the social atmosphere fell sharply. During this visit to England he felt ill at ease.

After he had recrossed the Channel, he took his wife and the children straight to the little University of Marburg in Hesse, and settled down for the winter. His idea was to learn German, work in the laboratory of the eminent chemist, Hermann Kolbe, and find out what he could about German universities. He took no particular problem with him to Kolbe's laboratory, and appears to have valued the chance to work at chemistry less than the opportunities to observe, at close range, how a German university and a laboratory like Kolbe's were administered, and how the students were treated. A great deal

of his time was necessarily spent in learning the language. Toward the end of the winter, when he could speak enough German to make his wants known and to converse a little, he went off on short expeditions to visit institutions in Karlsruhe, Heidelberg, Hohenheim, Stuttgart, Tübingen, and other places. These visits repeated the procedures of the previous winter in Paris. While making them he called upon a number of the chemists whom he had previously known only by their reputations and writings, and had the satisfaction of seeing what manner of men they were in the flesh.

People have said — usually those who were opposed to his policies — that Eliot's ideal for Harvard resembled too much the pattern of a German university, and have assumed that what he saw while in Germany was what won him to a belief in some such ideal. No support for this is to be found in the letters, written from Marburg, that still survive, and there is little truth in it beyond the broad fact that his ideal was something more like the Continental system than like that of Oxford and Cambridge. A relevant passage may be quoted from a letter to his mother dated October 30, 1864.

"... This is a small University, and I must see the large ones and more of this before I form any definite opinions about the adaptation of the German University to the wants of Germans, but this is quite clear — a German University would suit the 150 young men who enter Freshmen [at Harvard] every year, about as well as a

barn-yard would suit a whale.... The system is utterly inapplicable with us, for the reason that we could only copy its looseness without being able to imitate its restrictions. For instance — entrance to the learned professions is impossible in Germany without certain papers which the University only delivers. Hence a student *must* pass his examinations sooner or later in order to get the means of living. An American College can have no such whip as this to hold over its students — entrance to all professions is free; at least the Colleges have no control over the matter. Be it said on the other hand that a *man* (not a boy) can learn many things in Germany which are not taught at all with us, or which are imperfectly taught."

In Germany the so-called "philosophical faculty" was the heart of the university. Before Eliot went abroad, he was well aware of that salient fact, for it was the first point to be remarked by Americans, like his Uncle Ticknor, who had frequently discussed ways and means of bringing something like a philosophical faculty into being in connection with American colleges. There is nothing to indicate that Eliot was captivated by the constitutional pattern of European universities, or that he brought home any European recipe for use in America. What he was impressed by was what he alluded to in the last sentence just quoted, namely, the range and variety of subjects among which a young man might choose his studies, and the high quality of the instruction offered in all of them. This had impressed him in France before ever he got to Germany. During his visits to the University of Paris, he

noted that, although the instruction seemed to be no better in quality than similar instruction at Harvard, its quantity was much greater. Instead of one course of fifty lectures on Chemistry, he found five or six different courses of forty-five to sixty-five lectures each, all concerned with chemistry or its applications to the arts; and similarly in other subjects. Being too good an observer not to see a connection between this abundance of courses and much else in the way of culture and technical efficiency that he admired in French and German civilization, he could recognize it as an admirable feature of the more highly evolved European social order. He wanted his own country to emulate the quality and variety of instruction offered in the Continental universities, rather than to imitate their constitutions and adopt their rules.

When springtime drew near, the Eliot party moved south to meet the season, crossed the Alps after a week in Munich, went to Genoa, and thence on by boat to Naples. Moving northward again, they arrived in the city whose ground had so often been drenched with the blood of political murders on the fatal fourteenth of April. But the news of Lincoln's assassination did not reach Rome immediately; indeed, strange though such slow communications seem to us now, not for twelve days.

There has been no space for the numerous pages of Eliot's correspondence which discussed the Civil War, the progress of the presidential campaign of 1864 as reported in Europe, the state of mind of the people he met who

talked about the conflict, its meaning to them, and its usually more universal significance in his eyes as a struggle in which the capacity of republican institutions to maintain their vital principles was being put to the test. He had often been profoundly uneasy and uncomfortable, had written for advice about what he might do to help the Union cause if he came home — only, one surmises, to receive discouraging answers; had wasted hours hanging around Monroe's Bank in Paris waiting for bulletins at anxious moments, and had told his mother that if he were drafted he would return immediately and not exercise his privilege of paying for a substitute. Now the news of the crime that marred the end for both North and South shook him profoundly and cast a gloom over the whole Roman holiday.

To his Mother

Dear Mother, — Thursday, Apr. 27th, in the morning we got the news of the assassination at Washington, the bare facts without particulars, Seward's recovery being said to be hopeless. It must have come just as suddenly to you at home. What a horrible shock it was — the loss of great battles would have been as nothing — battles and campaigns can be retrieved, but now the horrible crime of assassination for political reasons has stained indelibly the annals of the republic. That is the horror of it to my mind — the men can be replaced, the policy of the government will probably be unchanged, the war will go on without any intermission or faltering, but the

dreadful fact remains that an American President has been assassinated by an American. This is a crowning fruit of slavery to our eyes, but to the world and history it is a legitimate fruit of American institutions, such as they have actually been since the republic was founded. First, civil war, and now, political assassination. Oh, are we copying Rome? We have been proud of the security of our public servants without guards or any sort of protection against the people — we have said that assassination might be a possible crime for French or Italian or Mexican republicans, but never for Americans. ...In our admiration of the soldierly virtues of Lee and his army, we felt like embracing our enemies and welcoming them back to Peace and Country. But here is the most dastardly of crimes thrown across the path of conciliation. It is the last proof that our struggle is a struggle of humanity against barbarism, but how shall we redeem or get rid of the barbarians. I am no worshipper of men — even now, I don't like to hear Lincoln's name put too near Washington's, but his character seems to me a rough and ungraceful but truly noble growth of republican institutions. He grew to his work, which was holy and it hallowed him. You can count on your fingers the names which History will rank with his. It is the glory and strength of our institutions that we do not depend on any one man or any men for security or for the working vigor of our government. If the assassins thought that the government would be thrown into confusion by their work, they will be disappointed — Lincoln's death

will consecrate his policy in the eyes of the people and men will be found to carry it out. He did not lead the people — he rather followed the wisest and best thought of the people, and his successors will do likewise....

We have never felt so homesick as here and now — first glorious success, then Charlie Mills's death [1] and now this worst of public calamities. Rome is a melancholy place at the best, a place full of dust and death and memories of greatness fallen through wickedness, and full too of the present miseries of poverty, superstition and petty tyranny. Thursday afternoon we explored the pitiable ruins of the palace of the Cæsars — how many rulers had been assassinated there — yesterday afternoon we drove out to the Catacombs of S. Calisto and on through the tombs of the Via Appia. The catacombs were full of the memories of martyrs, and the ruins on the Via Appia were only mournful in spite of the delicious beauty of the air and scenery. I hate Catholicism as I do poison, and all the pomp and power of the Church is depressing and mortifying to me. I can't bear to see even the poor degraded peasants going on their knees up the Scala Santa, and kissing Jupiter's toe (or St. Peter's). The beastly Friars are an abomination to me and even the good which one recognises in the mass of superstition and corruption is distressing, because it will lengthen the life and prolong the influence of the Mother of Abominations. Nasty smells are not cheerful, and all Rome *stinks* — the dust

[1] Charles James Mills (H.C.'60), killed in battle, Hatchers Run, Virginia, March 31, 1865.

which covers everything in the house and in the street smells as if all foulest things had been ground together to make it, and even in the country round about the city one has the consciousness of something noxious which makes the region uninhabitable for months of the year. Beggars swarm and one can never forget this natural fruit of the institutions of the ruined land. Ruins don't agree with me, particularly in these times.... Teach children modern languages, is one of the lessons I bring home....

Affectionately Yrs

Charles W. Eliot

Here was, one cannot doubt it, an example of the way in which, during or even after a war, emotions that have found no vent in action and that underlie all one's calmer wisdoms will flare forth vindictively. But surely a more personal meaning attaches to this instance of what is commonly possible. It shows, in an ugly way, perhaps, but none the less impressively, what a fierce attachment to certain ideals, and what passionate aversions smouldered in an organism that superficially appeared to be too cool and rational. The mood did not pass in an hour. A fortnight later he wrote again: "... People seem to be discussing penalties — I hope Davis and as many of his *civil* advisers as can be caught will be hanged after trial, but that all those who have done nothing but serve in the army (no matter whether general or private) will be unmolested. If the rebel was man enough to take his life in his hand for his bad cause, there is some hope for him

and he should be pardoned, if there be nothing else against him. For the disloyal men who represented the seceding States in Congress in 1860–61, hanging is too good — some meaner punishment should be found — imprisonment for life on the food they used to give their slaves, and to perform I don't know what work — any labor would be too honorable for them. As to the Governors of States, the editors of newspapers, and such small fry — let them alone. I consider that the South has got to be colonised anew, and that the former rich, slave-holding class has got to be wiped out like the Indians." A year before this, Eliot had said, in a letter to Theodore Lyman, "To my mind the object of the war is the triumphant vindication of the power of the Republic, and I shall be disappointed if it does not also prove that a republic is the most gentle, just and honest, as well as the strongest of Governments."

It was while Eliot was in Rome fulminating at Jeff Davis and loathing the *genius loci* that there came to him the first offer of employment at home — an invitation to become superintendent of the Merrimack Company's textile mills in Lowell. To accept would be to abandon teaching and science.

The financial arguments were all on one side. The privations and hazards of an academic career were fully as discouraging in 1865 as we know that they recently appeared to be after the World War. They were exaggerated by the effects of an inflated currency and by general

economic unrest. Eliot's friend, Edward Pearce, whom he had left in charge of the class in Engineering at the Scientific School, wrote as if it was not to be expected that he would refuse the Merrimack offer. Pearce himself gave up teaching that summer. James Mills Peirce did not feel that his own tenure of his post at Harvard was very stable, and did think a business life held superior advantages.[1] The Merrimack Mills promised a salary of five thousand dollars plus a good house, rent free. That was not only fully twice what he could hope for as a teacher, but more than he could have dared to expect on first going into business. At that time the cotton mills of New England enjoyed a more conspicuous leadership in the country's young industrial development than they have maintained since, and the Merrimack Company was one of the strongest and best of them. Its superintendent would have opportunities for influence and usefulness. When he returned to America, Eliot must begin to earn again: Harvard's doors were closed to him, for the moment anyway, and there was nothing else in particular in prospect.

He surely realized by this time that he had a strong taste for organizing and administering. This post would have given it scope. He must have felt, even if dimly, that if science interested him, it was not because he was first and last a lover of her laws and generalizations, nor only

[1] Pearce's letters reached Eliot after he had made his decision. They are merely symptomatic of the doubt and dissatisfaction that were in the air and that Eliot had certainly tasted.

because the clarity and precision of science was congenial, but because science answered the questions of practical men and conferred knowledge and power upon those who could guide the labors of their generation. During nearly two years in Europe he had found himself as much fascinated by what he could learn concerning the methods by which science could be made to help industry as by what he discovered about the organization of institutions of learning. He was thinking much about what his own young country needed, and his hopes for the United States took account of industry and commerce as well as the field of academic endeavor. To be useful in the world was perhaps his chief desire, and he knew perfectly well that a man's influence is ultimately determined by his outlook and capabilities more than by his particular "job." Who now can say that the history of industrialism in New England might not have been different and perhaps happier if Eliot had said *Yes* to this offer? It was not obvious that he must say *No*.

To these surmises a letter that was written from Rome on April 18 gives color.[1]

To Arthur T. Lyman

April 18, 1865

... In one of my late letters from home, there was an inquiry which came from your father about the mode of

[1] It has been discovered since the foregoing paragraph was written, and one reason for reproducing part of it is that Eliot must have written more letters about his observations on the applications of science to industry in Europe to Storer, Arthur T. Lyman, and others; but this is the only one of them that has been turned up.

making aniline colors. I can illustrate the general subject of inquiries into technical secrets in Europe by the facts concerning these colors. They are made first by processes which are patented and therefore described in printed specifications, secondly by processes which are secret — the private property of their discoverers — and which are not patented in order to avoid the necessary publicity. Rights under the processes of the patented class can be bought, but the secrets of the second sort cannot be got at, at least not honorably. A secret of this sort is a valuable property, and of course it is well guarded. When I was working in Kolbe's laboratory last winter, one of the students made a new aniline color, an orange tint. Nobody in the laboratory except Kolbe and the student himself knew how that color was made. There is a second serious difficulty for American manufacturers — many of the receipts for aniline colors contain ingredients which are not to be had in America, unless by importation from Europe. For instance, some favorite blues and purples patented by the chemist Hofmann, and his associates are made with iodide of ethyl (among other things). Iodide of ethyl is made from iodine and alcohol. When I left America not an ounce of iodine was manufactured in the U.S. Since the war we have a tax on alcohol which would make it impossible for the American to compete with the German manufacturer of iodide of ethyl. The fact is, that American inferiority in the technic arts is not an accident or an exception but a necessary result of the present stage of our Republican institutions. Science, whether pure or

applied, is not yet naturalized in the United States — we have not the institutions which Europe has obtained through the patronage which Kings and absolute governments have bestowed for centuries upon the arts. Every one of the famous universities of Europe was founded by Princes or privileged classes — every Polytechnic School, which I have visited in France or Germany, has been supported in the main by Government. Now this is not our way of managing these matters of education, and we have not yet found any equivalent, but republican, method of producing the like results. In our generation I hardly expect to see the institutions founded which have produced such results in Europe, and after they are established they do not begin to tell upon the national industries for ten or twenty years. The Puritans thought they must have trained ministers for the Church and they supported Harvard College — when the American people are convinced that they require more competent chemists, engineers, artists, architects than they now have, they will somehow establish the institutions to train them. In the meantime, freedom and the American spirit of enterprise will do much for us, as in the past....

Eliot took a few days to consider the Merrimack offer. Then, encouraged by his wife, who could make a decision cheerfully, even with anxiety in her heart, he said *No*. The common-sense reason he gave was that he thought it would be both foolish and cowardly to cast aside eleven years of preparation for teaching before convincing him-

self that he could not find employment for his professional capital at home. He did like teaching, and his head was now full of what should be done for education in America.

In mid-May a gradual northward and homeward progress was begun. Along the way there were mineral industries to be inspected in the Tuscan hills, and more schools and institutions to be examined in Vienna and Dresden. But the record of such things is already long enough. There were also the cities of northern Italy to be visited and in the sixties they offered an American traveler more picturesqueness than they do to-day. A man's responses to such impressions give a measure of his peculiar genius. Eliot's letters all had one admirable trait; they expressed his thought at the moment, without any concern for consistency. "I dare say," said he, "that I write contradictory things in different letters, descriptions of opposite traits, or unlike views of the same customs and peculiarities. All I can say," he continued wisely, "is, that any one who writes about a people, their manners and habits, their climate and external conditions, always in the same vein, consistently and without contradictions, is not a trust-worthy observer. He has some theory or some preconceived notion to corroborate, he has spectacles which intercept all the light except one color." Because he felt no concern about consistency, his remarks revealed him truly. A few more extracts from the letters are worth quoting.

To Miss Anna Peabody

May 29, 1865

... Deliver me from a life of exile, in however beautiful a land. I think the most objectless, forlorn, useless people we see are the Americans who live abroad without any profession or occupation but that of time-killer.... As a place wherein to wait for death on a small income, Florence struck me very pleasantly. It is clean and sweet, the people are not in the extreme of misery, one may study painting and sculpture to great advantage there, a man-servant in a tail-coat and white tie costs $8 per month and a chambermaid $4, there is a considerable society of English who live there for economy, there is a capital reading-room where all periodical literature can be had, and the protestant cemetery is a very neat and pretty spot. When you add that the climate is tolerably healthy, that spacious apartments of the dirtiest description may be had for $100. a year, that cabs cost 80 centimes the course, and that the environs present the finest views of a city set down in an amphitheatre of fertile and villa-ed hills, you have combined a very unusual number of advantages for persons whose object it is to secure food and drink, and æsthetic enjoyments at moderate rates. When ill-health, unsympathetic relatives, or ungratified art-longings drive Bostonians into exile, let them try Florence for a season.

We have seen more of our American kind here than anywhere since Paris. On the hill of Bellosguardo overlooking Florence live the Alexanders, the Stephen Perkin-

ses and the Bootts. The word villa is deceptive — it sounds grand or graceful; the thing is ugly, graceless and cheap all about Florence. It is a house built of brick or small stone plastered over with mortar and washed yellow many years ago. It is probably large — perhaps 120 feet long and 60 or 80 feet deep with two stories and a tower — the chances are that it has a roofless, open courtyard on the inside. The floors are made of brick, there is perhaps a venerable and dirty rope where we have the hand-rail on the stairs, the door-fastenings remind one of the hooks and bolts which we appropriate to barns and cellars, and all the public passages (for there are several families in one villa generally) are in a condition which would compare unfavorably with that of the gutters of West Cedar St. It was built two or three hundred years ago and nothing has been done to it since and its rents are all clear profit to the present proprietor. To live in such a place begets carelessness about externals — the flies are eating the uncovered sugar on the side-board, the linen just come from the wash is spread out on the billiard table, and the young lady's room looks as if dirty-clothes-bag, drawers, closets and wardrobes had no existence. I can conceive of my Mother in 21 rue Pauquet de Ville — just much easier than in a Florence villa....

... Of the magnificence of the [Milan] Cathedral too much cannot be said — it is the most amazing work of man which we have thus far seen. Its size is immense, its ornamentation is endless in variety and wonderfully beau-

tiful in every detail. Its statues are counted by thousands, the painting on glass is superb, and there are numerous bas-reliefs of the best workmanship both on the interior and exterior.[1]

... I can't describe Italy, and if I could I should have to wait till I was out of it to do such a job — now I am too lazy. The climate is not invigorating and to live among a dead people does not make one feel industrious and energetic. New Italy is alive — Rome and Austrian Italy stagnant....[1]

... We have been fortunate in our moons — a young one on the Bay of Naples, a full moon on the Coliseum, another full one at Venice. Last night was the most perfect of nights. We lay several hours right off the Place St. Mark, looking at the famous centre of the Venetian Republic as it shone in the moonlight...[1]

It is now two months and a half since we entered Italy at Botzen, and we have nowhere spent the time more profitably or agreeably.... I have learned much about Art in painting, sculpture and architecture and want to read about them if ever I have time for such self-indulgent pursuits....[1]

... The Dresden Madonna [Raphael's Sistine Madonna] is to me the most beautiful of pictures — a thing quite apart from all the rest of Art — better than any sermon except the Sermon on the Mount....[1]

Meanwhile Eliot's refusal to take the mill superintend-

[1] Extracts from letters to Mrs. S. A. Eliot, March 29, June 11, and July 4, 1865, arranged out of sequence.

ency in Lowell was no sooner received at home than William B. Rogers, the President of the newly founded Massachusetts Institute of Technology, sent him an invitation to become a Professor of Chemistry. Eliot was inclined to say Yes; but he wanted more information. The Institute had not existed when he left Boston.

"... That the school is new and its success something to be conquered," said he in concluding a first reply to Rogers, "does not make it any less attractive to me. Nothing has struck me more in Europe than the great and prompt success which all the well-organized Polytechnic Schools have had — Paris, Carlsruhe, Stuttgart, Zurich, Vienna — all illustrate the wonderfully rapid growth and wide usefulness of these technical schools. Looking at such schools, I have often felt how useful would be the work in which you have been engaged these several years in Boston, provided only that the community gave you an adequate support. What governments do in Europe individuals must do with us, and ours is infinitely the best way in the long run...." [1]

The letters Eliot received at this time showed, if proof were needed, that the expressions of regard that had reached him when he left the Scientific School two years earlier were more than mere consolatory *politesse*. Jeffries Wyman, Asa Gray, Ephraim Gurney, and John A. Lowell, to go no farther, were all hopeful that he would accept the new offer, and they were four of the wisest men

[1] To Professor William B. Rogers, June 20, 1865. *Life and Letters of W. B. Rogers*, II, 243.

who had watched his work in his old position. Lowell was the senior member of the Harvard Corporation as well as the Vice-President of the Institute. Wyman was sure that the Institute, "certainly in your hands if in those of any one," could be made "an educational power which is needed to meet a real want," and Gurney, writing from Cambridge, did not see why the direction of it, after Rogers should have passed off the stage, might not be as desirable as almost any educational post "except that one out here in which I am determined to live to see you." Eliot's projects for reforms in the Scientific School were now being adopted by others. "A change has been proposed in the Lawrence Scientific School," wrote Wyman, "which will amuse you ... that there should be introduced collateral studies of about the same amount and kinds as were laid down in your program which was so summarily rejected. What will amuse you still more is that the proposal came from Prof. Agassiz himself, apparently in utter forgetfulness of his former defiant attitude."

Storer, his former associate in the College, was to share Chemistry at the Institute with Eliot and was already at work. Pages and pages, scratched hastily in his well-nigh illegible script, now arrived; and some of them spilled gossip which Storer seemed to think Eliot ought to be warned about. The notion which Gurney and Wyman had formed — that Eliot might become the head of the Institute — had got into circulation and the fact alarmed Storer. Some one had said "that man will take to power in your Institute just as a duck takes to water." Storer

went farther and told him that "boundless ambition, lust for power, inordinate itching and the like were being mentioned," and that it had been said that Eliot had been looking toward the Presidency of Harvard. "I told them," he continued, "that all I knew of that story was that one Edwin Abbot had most insanely talked all around either at the time of Walker's resignation or Felton's death, about Eliot as Prex. I went on to say that the effect of this talk upon C. Eliot was to make him sick at his stomach when he heard of it. (As in faith it nauseates myself as I now think of it. Believe me old boy I am guiltless of any hand in *that* indecent outrage.)" From which one may infer either that the Presidency of Harvard had lately passed through such sorry times that it might go a-begging, or that a Tech. professorship in the hand was worth more than a Harvard Presidency in the bush, according to the estimation of the loyal Storer.

It will not do to infer that these curious reportings had much significance, however. All they proved was that Eliot was supposed to be a man who paddled his own canoe and paddled it hard enough to leave ripples in the wake. In nine years at Cambridge he had never had a personal quarrel; during a trying winter with Cooke, who argued theology in the laboratory and felt that there was not room for two chemists at Harvard, he had been on the defensive. Storer doubtless knew all about that tiff, and yet he was full of eagerness to have Eliot join the Tech. Faculty on a loose understanding that the two men should carry on the work of the Chemical Department together.

No colleague had ever accused Eliot of bullying or intrigue, however much some might fear him as a protagonist of policies with which they did not agree. It is clear that Rogers was not disturbed by what Storer reported. He knew all about Eliot's unsuccessful attempt to reform the Scientific School. Indeed, the program had seemed to him to be an excellent one, and its author had pleased him accordingly. Eliot's views had been quite of a piece with those which Rogers had been urging upon Boston's attention for several years, and they accorded with his policies for the new Institute. He and Professor Runkle, his nearest counsellor, knew their man and knew they wanted him.

During the correspondence about the Technology professorship, the little party continued its progress through the cities of the German States, then westward to Paris — ("Here we are again in the most attractive and instructive city in the world") — and across to London for a last three weeks in England. There the final decision was made.

To his Mother

LONDON, *Aug.* 2, 1865

So much nearer home and sailing day, and something tolerably sure to come home to. I have accepted Rogers's offer by a note which goes by this same steamer. J. Wyman, Gray, Lovering, Gurney, Storer, J. A. Lowell, Arthur T. L[yman] all decidedly advised me to take it, and Rogers's second letter was very satisfactory. I am quite

content with this opportunity, — in fact very glad to have it. I shall like the work, and shall also be happy to be put on a shelf where friends need not overpraise me, nor antagonists attack my good fame. I am well sick of being fought about — if there is to be fighting let me be one of the parties, not their target....

During the last days some of his antipathies seemed to be thawing out. Cathedrals appeared to him in a kindlier light, and in England at that. But still he asserted his own view.

To the Same.

York, *Aug.* 18, 1865

... As you will see by Ellen's letter, we are giving special attention just now to English Cathedrals, and very beautiful they are. I can quite understand what a hold the buildings and the services have on all educated Englishmen. I am a republican, and a Unitarian and a utilitarian, and yet I like amazingly to hear the choral service in these vast and beautiful monuments of Catholicism — I am quite looking forward to our next Sunday in Durham where we can go to the Cathedral twice in the day. And yet in a practical point of view, the keeping up of these services with their canons, dean, choristers and vergers is a monstrous cost, and for very little profit on any Protestant theory, for the Cathedral towns are now mostly small and the attendance on the services almost nothing. At Salisbury and Ely my family was the largest part of the audience....

Is not ease of mind a solvent of acerbities? Had the "not too young" man who had been transplanted two years before "from a quiet and very peculiar community into a whirlpool of strange things and stranger ideas" really expanded more than even he dreamed? It would be delightful to find that he had explored the question and supplied a full answer of his own, even though one cannot doubt what it would have been. But everything that two such years do to a person cannot easily be told, and to attempt the task would have entailed an altogether uncongenial effort of introspection. So, instead, a search among his last letters discovers a balance-taking that ran thus:

To his Mother

GLASGOW, *Aug.* 27, 1865

... And here I am on my last page to you, the last of a two years' series. We have travelled far and in divers manners, and we have never met with any accident of any sort, either from horses, steam, fire or flood. We have never even had the beginning or alarm of an accident. The sum of our losses by the way, so far as I can remember, is an old umbrella and a German guidebook. Ellen has always taken care of the packing, so that this last is her feather. I never have had reason to think that any letter was lost, except a vague one from Miss Torrey. We have great reason to be thankful for our own safety from harm, and we are not less thankful that no bad or anxious news has ever come to us from our immediate families. It has

been a very peculiar time for a young American to be in Europe — the National circumstances were extraordinary, and my own were also peculiar and uncertain. Everything might have turned out badly, and everything has turned out well. Looking back upon my two years in Europe I can truly say that I am very glad I came, and that I stayed so long, and that I am going home now. Both Ellen and I have profited much by what we have seen and heard and read and done, and undergone. So far as the word "satisfied" is applicable to human life, I may be said to be satisfied with my two years just past, though of course I think I could do better on a second living.

Perhaps you will be as glad as I shall be to exchange weekly letters for daily talking. That will be a change for the better. We have a nasty ten days between us and you. Don't let anybody be bored unnecessarily about our landing. Perhaps I ought to have told you oftener than I have, that I love you very dearly. Somehow ink and paper seem unsuitable vehicles for the communication of Mother-and-Son affection. We will wait for better means in fifteen days. Your affectionate son

CHARLES W. ELIOT

CHAPTER V

1865–1868

The Massachusetts Institute of Technology — The "Atlantic Monthly" articles — Another year in Europe

The Civil War was over. In the North at any rate the poisonous mists of the slavery question had been swept away. Men's minds were liberated. The United States began to respond to the great scientific awakening of the second half-century. New tools and new processes were about to be introduced in every art and industry. Fresh ferments were beginning to work in the field of education. There, as in some other quarters, it was noticeable that innovations were effected by launching new adventures; the older institutions resisted change. Congress had passed the Morrill Act, which provided for the founding of colleges of agriculture and mechanic arts in all the States in 1863. These new land-grant colleges, so-called, were now being organized, and they reflected the widespread desire for what was called practical education.

"What a magnificent field for young American science!" Eliot had exclaimed in the twentieth birthday letter that announced his choice of a profession. "New colleges springing up everywhere, government expeditions by land and water, mines and factories, all requiring scientific aid, and very few scientific men to meet all this demand!" He had divined it; and now that the "demand" was becoming greater than he could have foretold, he was

ready to teach young men how to pursue and apply science.

The Massachusetts Institute of Technology was one of the new ventures. Under the presidency of William B. Rogers, who inspired its beginnings, it was dedicated to a method as well as an aim. It was to provide an education for young men who wanted to be mechanical, civil, or mining engineers, practical chemists, builders or architects. In doing this it was to put into practice the principle that students of what are now called laboratory and shop subjects should, at every stage, handle the chemicals and apparatus about which they were learning. It was also the policy of President Rogers and his colleagues "to furnish such a general education founded upon the mathematical, physical, and natural sciences, English and other modern languages, and mental and political science as shall form a fitting preparation for any of the departments of active life." In other words, the Institute was not a mere trade school; it aspired to prepare men for the scientific professions and architecture by giving them a broad grounding plus a certain technical proficiency. There was to be a four years' course and advancements from grade to grade were to depend on frequent examinations and tests.

Neither the Lawrence nor the Sheffield Scientific School had such well-defined aims, for both had been much influenced by the proximity of colleges that were still wholly dominated by the classical traditions, and by their subjection to governing boards that existed first for

those colleges. Neither of them had a four years' course or had adopted the laboratory method of instruction in a systematic way.[1] The original faculty of ten in which Eliot found himself was an enthusiastic band of congenial and competent workers. Two of their number, Rogers and Runkle — who succeeded Rogers in the presidency — would have been men of mark in any academic society. They were supported by trustees who were entirely sympathetic with their aspirations. Within a year the Institute was housed in a new building, well planned and suitably equipped for its work. Eliot liked to think of it as a "pioneering" enterprise. That is what he called his own teaching in the chemical laboratory.

When the Institute moved into the new building on Boylston Street, it found it had room for more students then were yet enrolled. Thereupon Rogers proposed that Eliot and Storer should provide a course of instruction in laboratory methods, for teachers of chemistry, both men and women. "And I think," said Eliot later, "the most interesting teaching we did during the first two years... was to classes of rather middle-aged teachers, both men and women, who to the number of thirty or thirty-five persons accepted the advertised offer signed by President Rogers to receive such a class.... These men and women, anywhere from twenty-five to fifty-five years of age, were, of course, eager to learn the novel method, but they had not the faintest idea how to learn it, how to work them-

[1] The Rensselaer Polytechnic Institute in Troy, New York, offered a four years' course. Its admission requirements were not high.

selves with their own eyes and fingers, to make their own experiments and to draw their own inferences. We finally had to give them a series of sheets describing the experiments we wanted them to perform, and describing them in a good deal of detail. Even then these experienced teachers could not grasp the idea of making their own observations without imitating or copying, then describing accurately what they saw, and lastly, drawing the right inference from what they had themselves done and seen. Over and over again we would find those old teachers working away to 'see what the sheet of paper told them they ought to see, or might see.' Their idea was to verify the statement made on the sheet of paper; and this remained the supreme difficulty of teaching that class from beginning to end. We had a good deal of the same trouble in teaching the younger students to see for themselves, to record for themselves, and then draw the right inference; but the younger students were more limber at it than these experienced teachers were."[1]

The "sheets" referred to were doubtless proof-sheets of the book on which Eliot and Storer were engaged, and to which the following letter relates:

To George J. Brush

Mar. 18, 1867

Dear Brush, — Storer and I have been investing some time and pains in the manufacture of an elementary manual of Inorganic Chemistry — primarily that we may

[1] *Tech. Rev.*, xxii, 430, 434.

teach Chemistry in this School as we think it ought to be taught, secondarily, in the hope that the method of teaching the science in other schools and in colleges may be thereby somewhat improved. I have sent a copy of the thing, so far as printed, to you and another to Johnson, to whom this note may be passed when you have read it. Our chief points are —

1. Exclusion of physics, except the little required in the description of individual substances; 2. Theories and definitions given in immediate connection with concrete examples, and worked in gradually, not all administered in one large dose before it can be assimilated or produce any effect but that of causing nausea; 3. Discouragement of the memoretic teaching of chemistry which prevails, and the substitution therefor of experimenting before, and better *by*, the pupils.

In our own school every student who studies chemistry at all performs the experiments of the manual with his own hands, and sees, smells and touches for himself. The next best way we believe to be the showing of the experiments by the teacher at each lesson, not in the magnificent style of lectures, but in the small, cheap way which the book prescribes. In college for instance the experiments are better shown by the tutor in the tri-weekly recitation with small divisions, than by the professor in the weekly lecture before a large class. The directions for the experiments may seem to you painfully minute, but our experience in using the book this winter has convinced us that they are not too full for persons wholly unaccus-

tomed to manipulation. The fragmentary condition of the book is due to the fact that Cooke decided to use it this term at Cambridge, although it was not finished; we had what was ready stitched up for his class. The rest of it, some 160 pages, will be ready in a couple of months.

We have printed only a small edition, because we felt that by using the book in the laboratory we should find many points on which it could be improved. If you or Johnson can give us any suggestions, fundamental or otherwise, we shall be very much obliged to you. The book is not written in the interest of any particular theory or system of notation — we don't care much about either of those matters, but we have endeavored to distinguish between facts and names or hypotheses. You will recognize the fact that a text-book is nothing but a compilation — our work has been simply one of selection and arrangement. There is nothing original about this little book except its general idea (and not all of that) and its temper....

Eliot had in fact turned from research in chemistry, for which he was not fitted, to original work in the teaching of the subject; and with the happiest results. The text-book of "Inorganic Chemistry" which he and Storer got out caused a revolution in the teaching of elementary chemistry by making it a laboratory subject in the United States. Revised from time to time and after a few years abridged by Professor W. R. Nichols, it found a wide

distribution and its influence crossed the Atlantic.[1] The "Inorganic Chemistry" appears to have been a work of genuine collaboration. Who was mainly responsible for it was a question that never arose between the joint authors except when a title-page was called for by the printer. Then each proposed that the other's name should come first. A coin was tossed, and Storer announced that Eliot's name was to have precedence. Eliot accused him of not having looked at the coin, but Storer "would not recognize the correctness of Eliot's observation."[2] Our knowledge of the two men plus the fact that Storer was then teaching inorganic chemistry, lead to a presumption that Storer would have given much attention to details, and that Eliot was keenly interested in the idea, and the manner of presentation. His share in the book which expounded the laboratory method of teaching the elements of the subject in a skillful way for the first time was his chief contribution to chemistry.

[1] "In the year 1874 I was making a visit to England for educational objects, and among other places I went to Rugby School. I was entertained there in a very cordial way at the house of the principal science master. He showed me all about his laboratories, and on one of the desks at which a student was at work, I saw a book which looked familiar to me, and asked my host what it was.

"'Oh,' he said, 'that is Eliot and Storer's "Manual of Chemistry."'

"'Do you use it here?' I asked him.

"'Yes,' he replied. 'We had to — it was the only book of the kind in the English language.'" (C. W. E., *Tech. Rev.* XXII, 430, 436.)

A little "Manual of Qualitative Analysis," published by Eliot and Storer in 1869, has recently been described as a good but less important book.

Professor C. L. Jackson kindly read the paragraphs of my manuscript which dealt with Eliot's chemical work and made suggestions which I have gratefully incorporated in the text. H. J.

[2] L. C. Newell in *Industrial and Engineering Chemistry*, XVI, 637.

None of the first Faculty of the Institute were able to forget that they were engaged in an experiment. Their meetings were lively, for questions of method and policy kept coming up. Eliot would not have avoided such questions if he could. He had been thinking about them since he began to teach in the College. They had been his constant subjects of inquiry abroad. At last he cast his own ideas into two articles entitled "The New Education; Its Organization," and published them in the "Atlantic Monthly" in February and March, 1869.

These papers were his first contribution to the public discussion of Education; and they should be recognized as belonging among his very ablest. The opening sentences put the subject of the articles before their reader in the form of a question by an imaginary American father:

"What can I do with my boy? I can afford, and am glad, to give him the best training to be had. I should be proud to have him turn out a preacher or a learned man; but I don't think he has the making of that in him. I want to give him a practical education; one that will prepare him, better than I was prepared, to follow my business or any other active calling. The classical schools and the colleges do not offer what I want. Where can I put him?"

There followed a résumé of the country's recent experience with several attempts to organize "a system of education based chiefly upon the pure and applied sciences, the living European languages, and mathematics, instead of upon Greek, Latin, and mathematics, as in the estab-

lished college system." Ballasting his argument with facts, not only reviewing the proposals of the Yale Department of Philosophy, the Lawrence Scientific School, and others, but scrutinizing their achievements, counting their students, examining the amount of work which the students had actually done, he reached certain conclusions. The schools which had started out, like those at Yale and Harvard, to be professional schools where college graduates might take a professional course as they would at a Law School, had disproved the practicability of their own programs. They had settled to a level with the colleges by enrolling boys of college age, but they had failed, for reasons which Eliot pointed out, to provide a course that was as respectable in a scientific way as was the classical course in its way. In other institutions, like Dartmouth, where there had been attempts to carry on a classical and a scientific course within the same college, the experience had been doubly disappointing. The final conclusion was that the most promising method of providing higher education of the technical sort was that of an independent institution like the Massachusetts Institute of Technology, which could proceed with a single aim, maintain standards, not only of admission but of promotion from class to class, and give a course equal in duration to the classical course in the colleges. It should begin by laying foundations in mathematics, chemistry, physics, and should also provide its students a good command of their own language, the knowledge of a modern foreign language, and some knowledge of political economy and American his-

tory. On top of this foundation it could add more specialized training in the various branches of engineering.

Having thus dealt with the institutions of the higher grade, which necessarily determine, in large measure, the nature of the lower schools that fit boys to enter them, Eliot turned in the second article to the preparatory schools. What he had to say on this subject foreshadowed ideas that he was frequently to press upon the attention of the educational world ten to twenty-five years later. The study of English must have a large, in fact a primary place in schools. Among language studies, Latin had better follow. Some of his remarks about the usefulness of Latin studies ought to have been welcomed by the advocates of disciplinary studies. After Latin he advocated teaching French, a language necessary "for all educated men." In the sixties science was generally quite ignored by the schools. Eliot admitted that most of the sciences, "if attacked in earnest, are much too hard for young boys," but he thought that physical geography, "with a glimpse of geology, and botany taught from flowers and plants, not from books," were studies well adapted to school age. "It is to the appearances of things that a child's attention should be directed, not to their explanations or supposed final causes." And "scientific study will proceed in maturer years with greater ease and firmness, if the common phenomena with which science deals have become domesticated in the mind during childhood." History, he thought, should also be taught in school, at least American history; and he advocated what

he kept on urging to the end of his life — that "judicious parents will see that their boys learn to draw and sing, either in school or out of school." In short, granting that as a matter of educational organization it is "worth some sacrifices to keep all the boys together until the last year or eighteen months of their school life," he contended that a schoolboy's "course of study should be representative; it should be so selected as to reveal to him, or at least to his parents and teachers, his capacities and tastes before he is seventeen years old.... The teacher, mother, or father can do nothing better for a boy than to find out, or help him to find out, this innate aptitude."

There is the kernel of Eliot's faith in the "elective system," and, indeed, of his whole philosophy of education. "The natural bent and peculiar quality of every boy's mind," said he, "should be sacredly regarded in his education; the division of mental labor, which is essential in civilized communities in order that knowledge may grow and society improve, demands this regard to the peculiar constitution of each mind, as much as does the happiness of the individual most nearly concerned."

Eliot's election to the Presidency of Harvard immediately after the publication of these articles led to their being searched for passages that might give a clue to his probable opinions upon questions which it had not been his intention to discuss. His dogmatic manner of statement made it easy to pick out sentences that seemed to show him to be a radical enemy of the classical tradition. For instance: "It is not to be imagined that the mental

training afforded by a good polytechnic school is necessarily inferior in any respect to that of a good college, whether in breadth, vigor, or wholesomeness. Certain it is that an average graduate of the Zürich Polytechnicum or the Paris École Centrale has a much better title to be called 'learned' than most graduates of American colleges and professional schools.... " "The term *learned profession,*" he added, "is getting to have a sarcastic flavor. Only a very small proportion of lawyers, doctors, and ministers, the country over, are Bachelors of Arts. The degrees of LL.B. and M.D. stand, on the average, for decidedly less culture than the degree of A.B., and it is found quite possible to prepare young men of scanty education to be successful pulpit exhorters in a year or eighteen months. A really learned minister is almost as rare as a logical sermon."

But what chiefly emerges from a reading of the "Atlantic" articles now should have been recognized in 1869. If the author spoke contemptuously of certain conventional fruits of the traditional system, he was impelled by a vehement desire to see a more ample provision for diverse individual needs and a better adaptation to the requirements of the time. What hope could there be for a democracy unless a reasonable preparation for practical and useful pursuits could somehow be provided for its young people?

One also perceives in reading these articles that Eliot was already thoroughly impressed with the need of providing for the prosecution of advanced work beyond

graduation from college. In noting that certain institutions which had begun by expecting to be professional schools of the graduate grade had wisely taken their station on a college level, he was considering what was essential to the technical training and was not dismissing advanced work. Indeed, in reviewing the history of the Yale Department of Philosophy, he dwelt particularly upon the significance of its attempt to provide for post-graduate study not only in science but in the classics, Sanskrit and other Oriental languages, the modern languages, philosophy, history, mathematics, and physics. He made it clear that he thought that "unpretentious but genuine" effort to give higher instruction deserved particular applause. The Doctor's degree had been awarded by Yale only thirteen times since 1861, but all the same, "... There is more of the university about the eight or ten Yale graduates who are studying in the Yale Department of Philosophy and the Arts, than in as many hundred raw youths who do not know more than a fair grammar school may teach."

In the midst of these eager and useful labors, Eliot looked up and beheld handwriting on the wall. His wife, a creature whose vitality was ordinarily brimming over, had been tired and run down for some time. No one had thought of being alarmed until one afternoon in the autumn of '66 there was a collapse. The doctor looked grave. It appeared that she had consumption.

There was nothing deeper in Eliot than his instinct for

family affection. There was nobody, there never had been anybody whose companionship so refreshed his spirit and brightened his world as did Ellen Eliot's. Beside the urgency of her need his own professional opportunities and ordinary duties seemed insignificant. But what could he do for her? The medical profession did not understand tuberculosis in the sixties; nothing was known about open-air treatment; how easily the disease may be communicated was not understood; and doctors did not recognize the necessity of husbanding strength and avoiding physical fatigue. Her father had died of this ailment; but her case was not a bad one and some people who were thought to be attainted did get well. Climate — mild air — was supposed to be helpful. One could try, and one must hope.

So the Cambridge household was broken up. Eliot carried his wife and the children — now three in number, for a boy had been born in July, 1866 — to Worcester, beyond the sea-fogs and raw winds of the coast. In the spring he took her to the Delaware Water Gap. In June, the whole family plus Mrs. Peabody and her unmarried daughter Anna sailed for Europe. That was the year of the Paris Exposition. Rogers had been appointed Commissioner for the State of Massachusetts and was to bring home a report. He was not well and asked Eliot to help him by reporting on what the Exposition had to show in the fields of inorganic chemistry and metallurgy. It was clearly the theory of the expedition that it would be well for Eliot to have an occupation and that a party which

included Mrs. Eliot's mother and sister would be able to make such divisions or combinations that the invalid would be looked after without feeling that she was on her husband's mind. Accordingly, Eliot studied the Exposition during the summer and made notes for a report that gave him work during a winter that they all spent in the South of France. But anxieties and sorrows multiplied. The youngest child fell ill; and after a few weeks, it died. Those were heart-breaking weeks — for the mother, who was not strong enough to support the strain, and for the father, who had to watch his child go and his wife's strength decline. Circumstances which he could not alter; forces which he could not understand and against which he was powerless to defend his nearest and dearest were pressing against him. Such situations are what test fortitude, patience, faith. During grim months Eliot moved about from Paris to Pau, to Biarritz, consulting the best doctors he could discover, scrutinizing them and their opinions, looking up lodgings, arranging housekeeping details, and sometimes acting as maid and nurse.[1] He sent home letters that recounted every cheerful event and that never uttered forebodings. In only one surviving letter — it is given below — is there any exposure of his feelings. But in the spring, on the way through London to the homeward steamer, ill and weary to the point of exhaustion, he got out twice at a wrong station, became

[1] "Charles is the most perfect lady's maid. I don't go near the trunk, and you would roar to see him arranging my clothes, laying out my collars and sleeves, warming my slippers." (E. P. E. to M. J. Peabody; from Biarritz, March, 1868.)

confused, and lost the family for an hour. He wouldn't have believed it possible! And, anyway, it wouldn't do! The others needed his vigilant care and he got himself in hand. But it seems quite clear that he had stumbled for a day on the brink of a nervous collapse.

Once home again in 1868, there was nothing to do except arrange for Ellen Eliot's comfort and resume work himself. Foreign lands or travel at home were not to be considered any more. After the summer had been spent in Brookline, in the house near the Reservoir now occupied by the Olmsted office, Eliot established himself and his family in Boston in the second house from the top of Chestnut Street on the north side.

A few letters written during these two years will be found to need no further explanation. The first was written before the trip to Europe. The two boys to whom it was addressed were seven and five years old respectively.

To his two Sons

Friday May, 24, 1867

Gap between two hills where the river Delaware goes through towards the sea.

Dear Charlie and Sammie, — Here we are by another river going quietly through another crack between other mountains. Do you remember Bingen on the Rhine, Charlie? This place is a good deal like that, only very much prettier. However, there is not water enough in the Delaware to float a steamboat — the Rhine is big

enough for large steamboats you know — so we had to come here by a railroad which runs along by the river-side. There is a large hotel at this place, but we are the only visitors. The people come here in summer, and it is too cold as yet, although the trees are out beautifully, and there are a great many wild flowers in bloom. The sun shone a little yesterday and in the afternoon we took a long drive. The roads were very rough and muddier than the muddiest place in Worcester on a very rainy day. Our wagon was so covered with mud that you could not tell what color it was underneath, and mamma's dress and my trowsers got well spattered. The roads were very hilly too and the humps in the roads for throwing the rain off one side (you know, Charlie, what they are) are made very big and high in this country, so that if we trotted down hill we got big jounces over these humps, of which there were many. We went over Fox Mountain to Stroudsburg and came home by Cherry Valley. It was a beautiful ride, but we got so much exercise that we were glad of our good supper and after supper we both went to sleep in our chairs in the parlor while trying to read. This morning the sun shines most of the time, but now and then black clouds cover him up, and the wind is strong and cool. Puff! Puff! Puff! There goes a long train of cars right under the window, carrying coal and lumber down to New York. It is such a steep precipice down to the track that I can't see the cars, until they get to a bend some way along the road. Yesterday we talked in the cars with a boy who sold books and

newspapers and oranges and candy to the passengers, and we found out that he began to work so, when he was eleven years old, about three years older than you, Charlie, and that he generally earned more than a dollar a day. Yesterday he earned one dollar and thirty-two cents on our train. You have got a good deal to learn, Charlie, in three years! That boy could take care of himself on the cars and could carry his books and oranges about, and could make change when he sold anything, and he could keep his money safe and all his things clean and in good order. And, Sammy, that boy did not eat any of the candy, or oranges, or peanuts, which he had for sale! I guess he had so much once that he did not want any more. Your affectionate father,

CHARLES W. ELIOT

To his Mother

ARCACHON, *Oct.* 3, 1867

... Ever since we left home we have been doing just what many people do for mere pleasure — a trip through the West and Southwest of England — a fortnight in London — a month in Paris — a visit to the Pyrenees — five weeks at Arcachon — the prospect of a winter at Pau — pleasant company a great deal of the time — a united family — for me release from teaching and a very pleasant and instructive job of writing to do. How happy we should have been and could be if the one thing we seek, health, had been or should be vouchsafed to us. In all lives there is a sum of delights from which must be subtracted a sum of pains. Our negative quantities are anxieties about

health. But we live in the present moment. Look at Ellen sitting on the floor last night after dinner before a pretty wood fire, merry and comfortable, playing with Bob lying in her lap, likewise merry and comfortable, toasting his bare toes at the blaze. Beautiful little mother, mighty pretty little boy (he has grown handsomer lately) — singing, kissing, squealing, laughing. Look at us, five minutes ago, round the breakfast table (12 M.), decidedly jolly — Ellen eating as her last course 1 dozen fresh figs and uncounted large chestnuts, Charlie quietly consuming everything permitted and asking for more, baby tearing bread, squeezing skinned chestnuts and smashing grapes on the table-cloth, and all feeling comfortably. We have just received a *Transcript* — Mrs. Peabody's — she is absorbing it at this moment. Tell me all about your return to Charles St. That house looks pretty comfortable from here. Your affectionate Son,

CHARLES W. ELIOT

To the Same

6 RUE PORTE NEUVE, PAU, *Nov.* 28, 1867

DEAR MOTHER, — The weeks run by very fast. The weather is superb, though as cool as ours at this season perhaps, but absolutely calm which makes a great difference in one's sensations. During the last week there have been heavy frosts every night. Verbenas, salvias, heliotrope and geraniums have all been killed. Some roses still survive. The leaves have mostly fallen but the grass continues to be very green. There has not been a cloud

in the sky (except occasionally in the early morning) for days and days. We are always expecting a long spell of stormy weather, but it does not come. If it should rain for a month, it would only make up a fair average of weather. There is no doubt but that the place suits Ellen better than any place we have been in thus far. The comfort of living is one reason — the enjoyments of one sort and another, which the place offers, contribute — and the calmness of the atmosphere is something. At 7 o'clk I push open the blinds and Ellen lies in a delicious bed watching the mountains change color. They are dark blue at first and sharply cut against the bright sky. The sun touches them and they become pink all over, and then a whitish mist rises between us and them and veils but does not hide them. At 7½ Donine comes in with a tumbler of asses' milk and *café au lait* with a slice of bread. Ellen takes the milk, warm from the ass, in bed, while I take my *café au lait* at the table. If Charlie is dressed he comes and eats his bread and milk with me. Then I go off to my study and baby comes down and sits with his mother while she is dressing. Charlie has his lessons set and spells over his new words with Ellen and about 8½ arrives in my room. We work away till 10 o'clk when luncheon (dejeuner à la fourchette) is served. This arrangement of meals is altogether the best for Ellen. You remember that Ellen never liked her breakfast at home. By 10 o'clk here she is ready to eat a good meal, omelette, meat, bread, cheese, fruit and wine. She enjoys it, and so do we all — for we have got a capital cook. The women

folks sew &c. before and after breakfast for a while. By 12 o'clk we are ready for exercise. Annie [Peabody] and I are riding three times a week — I enjoy it very much, the only drawback being that I grudge the $1.20 paper which it costs each time for myself. We have given up driving because it is too cool for Ellen. She walks every day sometimes to the shops sometimes to the country. There are many pretty walks about us. I go with her, when not riding, and we are often accompanied by the entire family. Ellen must be at home by 3 o'clk. It becomes decidedly colder after that hour. She lies down generally before dinner; I work again perhaps. The boys have a read and a play in the nursery upstairs. By five all hands are quite ready for dinner. The baby sits up at the table and enjoys himself as a rule better than at any other hour of the day. The evening is a long one. The boys are round till 7 o'clk but then tea is brought in and we are quiet and cosy by our wood fire. Ellen is rather apt to get on to the sofa and take a succession of naps which she likes. Annie and Mrs. P. are also given to naps so that there is not much conversation after 8½ as a rule. I read my *Figaro* (a Paris paper) every evening. It is an interesting time to be in France, because there is a ferment in the upper classes. Every night there is something said obliquely or under all reserves about arrests, searches, imprisonments and fines for political or press offenses. The Emperor talked in his speech about maintaining his authority and firmly repressing revolutionary tendencies. It is by far the most significant part of the address. I pity

educated Frenchmen who are not imperialist by conviction. They are afraid to speak their minds, and yet being impulsive and rash by nature, they are constantly committing themselves. Then they don't trust anybody. As [Dr.] Caznave said to me yesterday — "I am not sure of my domestics." There is a deal of slavery in that statement. My mind is divided between two convictions, apparently inconsistent. 1st. It is plain that a people which has submitted to the actual government for 15 years is not fit to be free. 2nd. A people, in which the upper classes are so intelligent, volatile and so devoted to a *theory* of liberty, will not long remain in a state of passive slavery.

I hope the licence triumph in Mass. [over prohibition] will be used with moderation. Gov. Andrew was one of the best types of American character. His last work was to convince the people of Mass. that men are not to be made moral by enactments of the Legislature. The Republican party can learn something from Gov. Andrew. Acts of Congress will not manufacture freemen. The French have universal suffrage and are slaves.

Your letters reach us now regularly on Mondays. Affec'ly

Charles W. Eliot

The death of the youngest child, mentioned as the "Baby" or Bob in the two preceding letters, is the sorrow to which Lyman refers in what follows (January 5, 1868):

My Dear Charlie, I wish I could say "Happy New Year" to you, but that will hardly do, with your late sorrow upon you. As if to give something for your determined character to bear, Providence has laid on you many trials, beginning, (when you were only four years out of college) with the loss of the property. That laid a train for many things — it shortened your father's life many years — it undermined your mother's constitution. It raised unpleasant relations in the family. Since then you have, as it were, fought for it! And, with much labor and some sorrow, you have, so to speak, *dug out* a vast deal of happiness — from your fortunate married life and from the very studies which cost you so much hard work. It is in this way that a brave, determined man turns a bad case to a good one, by main force. Such an one may be knocked down, but he can't be kept down. I have often wondered why so much happiness was dealt out to *me* — and I still wonder whether two or three big blows may not tumble on me, all at once, to make up that balance which seems to exist in worldly matters. My father — a man of a most sensitive temperament — was crushed by his sorrows, and really died by inches — and yet here I am, with a most cheerful temperament (which I will tell you, privately, comes in part from want of proper sensitiveness) and I get no troubles at all, compared with other folks. It's not yet balanced, depend on it!...

To Theodore Lyman

PARIS, *Jan.* 23, 1868

... But what is the use of going over these things — as you say, the Cambridge episode is closed. It is a small satisfaction to me that the "homely" double house sold well. $31,000 is a good price for the establishment — no money was lost there. I *have* associations with that house. I, a boy-husband, brought home there a girl-wife. She bore four children there. One child died there, and I shall always see the scenes of that time a great deal plainer in my mind's eye than I see the nearest pictures of today's doings. And it was to that nursery that I went home one night from mother's sick-bed to find that in a minute the whole aspect of life had been changed for us and that we were to be pulled up by the roots. Well, roots that only run into the ground, like house walls, can be treated very roughly with comparative impunity, though I don't like to think either of 31 Beacon St. or of the Cambridge house. Heart-strings, on the other hand, when broken, can't be mended, tied up again, or be made in any way good. We shall never get over what we have been through this past year, if we live to be 100, though we may laugh and be busy and interested in whatever our hands or heads find to do. As you say, my wife has given me the best part of all the happiness I have had since '57 (and until November '66 they were happy years). She is unqualifiable — always was and is now. Nevertheless a sound body is a very desirable case for the most beautiful soul....

Give our love to Mimi — we rejoice in her recovery. Cora is admirable. What she did for mother at Christmas was a good deed, beautifully done. I'm sorry for Uncle X, if Fred plagues him. S—— will make a respectable old fogy, if he wears tight corsets. If his natural man had full play, he might not be a credit to the family. Uncle Y is an unprofitable subject — except for his heirs. I am writing a report on Mining and Metallurgy at the Exposition which is gradually getting rather lengthy. It is astonishing what two or three pages a day will amount to. Work, however, at least such work is not a source of happiness — it merely reconciles one to living.

Good-bye, my boy, and keep your happiness account unbalanced as long as you can. Faithfully yours

CHARLES W. ELIOT

Lyman's happiness account remained unbalanced for some years, but before it was closed, his foreboding was justified tragically; for the last part of his life he bore the burden of such illness as no man of less gallant spirit could have suffered with the patience and fortitude that he displayed. But that is not part of this story.

CHAPTER VI

1868–1869

The Presidency of Harvard vacant — Cross-currents and oppositions — Eliot elected by the Corporation — Death of Ellen Peabody Eliot —Rejection and subsequent confirmation of the nomination by the Overseers

As Eliot was beginning another year of teaching at Technology in the autumn of 1868, the Presidency of Harvard College was vacated by the resignation of Thomas Hill (September 30, 1868). The nomination of Hill's successor lay with six gentlemen who knew how to keep their own counsel — the remaining members of the Corporation; but before they could act, it was necessary for the Overseers to pass a vote consenting that the Corporation should proceed to the election of a new President. After the Corporation should have chosen some one in particular, the University statutes would again throw the matter into the Board of Overseers, requiring from it a vote of concurrence. In this instance the Overseers did not consent that the Corporation should proceed to an election until February 25. They appointed a committee to confer with the Corporation about the definition of the President's duties and continued a rather inconclusive discussion of that question. It is difficult to explain this delay of nearly five months except on the theory that the Overseers — who had no idea who was going to be elected and who had no power to initiate a

nomination — were disturbed by a sense of impending change and a feeling of uncertainty.[1]

Questions of policy were implicitly bound up with the selection of the next President, and it could certainly be said that the issues were numerous and involved. Cleavages in opinion crossed each other.

In the first place there was an opposition between the innovators who talked about foreign universities and practical education and favored a liberal enlargement of the list of elective studies, especially in the direction of the sciences, and those who wanted to hold the College to the tradition of a simple course of required work in the humanities. The former filled the conservative alumni with uneasiness. R. H. Dana and F. E. Parker, who were Overseers, belonged to the latter group and were among its leaders. "They both of them felt that a classical education was the important distinction between a man who had been to college and a man who had not been to college, and that anything that diminished the importance of this distinction was essentially revolutionary and tended to anarchy; that the advent to power of men who preferred science to the classics, and the investigation of natural history to preaching from the themes of the Old and New Testaments, was going to produce an entirely new type of educated men, as the result of the instruction afforded by the college; that it would be breaking in upon

[1] The Overseers met October 7; January 7 (when they tabled a message from the Corporation requesting consent to proceed to an election); February 11; and February 25 (when they gave consent).

all their cherished associations, recollections and sympathies, and that it was to be deferred, so far as possible, to the future, if it could not be postponed altogether." [1]

There was also a special sort of conservative sentiment associated with the class system. To the extent of about three quarters of their work all the members of each College class still pursued the same studies, went to the same lectures and recitations, sat under the same teachers, wrote similar exercises, and took the same examinations. As a result of such regimentation, the class system, well known in schools, and characteristic of almost all American colleges, had become an institution. Boys became attached to each other by all manner of ties while they passed, in gang-like freemasonry, through four years of almost identical experiences. But if a thoroughgoing elective system were to be inaugurated — if the undergraduate body were to break itself into numerous groups of students pursuing different studies throughout their four years — what would be the result? Clearly the College would "no longer be the same place." All the sentimental loyalties that cling so obstinately to traditional ways of doing things fortified the opposition to such proposals.

Louis Agassiz and men who thought as he did were eager to see more science and wanted the College to develop into a university in something like the European sense. They were anxious lest the organization of scientific studies should begin and pretty largely end with

[1] C. F. Adams, *Richard Henry Dana*, II, 152–53 (3d ed., 1891).

technological work. They did not like the phrase "practical education," for they knew that science is too rich and deep to be treated as little more than an aid to the invention of useful devices. Caught between the people who were jealous for the prestige of the humanities on the one hand and the popular demand for men of technical equipment on the other, they probably did not know whether they feared a classicist or a technologist most. If a man shared Agassiz's views, any one with Eliot's history and connections would have seemed to him to be dangerously addicted to technology. A moderate would have favored some one like Professor Ephraim Gurney, a humanist himself, a teacher of history, a man of the world with liberal ideas.[1] On the other hand, a true conservative would have argued for a dignified figurehead, like Mr. Robert Winthrop, or for the much-beloved Professor of Christian Morals, Andrew P. Peabody. That kindly man was also Preacher to the University and senior member of the College Faculty. He was in fact acting as President *pro tem.* He was a symbol of all the worthy and amiable traditions that had not yet spent their force, although they were fast losing their meaning. To some people he seemed the natural, to others the inevitable nominee.

Theology was in the background of the discussion, though not proclaimed. The American colleges of that day were all denominational or were severally impressed

[1] J. R. Lowell and E. L. Godkin induced John Fiske to write an editorial in the New York *Nation* for Dec. 31, 1868, in the interest of Gurney. (*Vide* J. S. Clarke, *John Fiske*, 1, 342.)

with some particular theological bias. The Unitarians were proud of having captured the oldest college in the country. During the first half of the century, while the controversies that Unitarianism provoked all over New England were still warm, Yale, which remained faithful to Congregationalism, had gathered in more students than Harvard. Latterly the college in Cambridge had been recovering its ancient leadership in size. That was a good sign. But liberalism may degenerate into indifference. What would happen if Hill's successor were to be quite outstandingly a layman and a layman who was identified with the so-called practical education rather than the classical traditions? It is not easy for us to realize how great an innovation that would have seemed. In the preceding fifty years seven men had held the Presidency. One, Felton, was a professor of Latin and Greek; one was Josiah Quincy; the other five had been ministers. In one of his articles in the "Atlantic Monthly" Eliot said, "The American colleges have taken and still take their presidents from the clerical profession almost exclusively... it is gradually becoming apparent" that they "are suffering from this too exclusively clerical administration." But this had not become apparent to everybody else. When Hill was chosen by the Corporation in 1862, the Overseers at first voted sixteen votes against nine not to concur in his election, and did not alter their position until the following October. Their reasons are on record. Hill was a Unitarian minister in good standing, but he had a turn for mathematics and a

taste for scientific speculation, and it was understood that he had been nominated as concession to the scientific faction. "It has been feared," a committee of the Overseers reported, "that Dr. Hill's predilection for the physical and exact sciences would give undo [*sic*] preference to those studies, and that the just claims of polite literature and classical literature might be slighted.... A few of those who opposed Dr. Hill's confirmation acted from a suspicion that his theology was of that kind which is foolishly styled 'rationalistic' and liberal by those who think it a mark of reason and of liberality to cast away all faith."

The University, so-called, had come to embrace several special institutions outside the College, namely, the Divinity School, Law School, Medical School, Lawrence Scientific School, School of Mining and Geology, Observatory, Botanic Garden, and Zoölogical Museum. Hitherto each of these had been left to its own devices by the President and Fellows and had conducted its own affairs with very little thought for what was being done in other parts of the University. The Presidents, confining their attention pretty completely to the College, had taught or preached as well as administered, and had devoted a large proportion of their time to the morals and discipline of the undergraduate body. The question was now being raised, whether the President ought not to be relieved of these duties. That seemed to impugn the prevailing theories about the difficulty and importance of discipline for college boys, and it also

brought up a question of university organization. Ought the President to interest himself equally and actively in all departments of the University? Ex-President James Walker, who was serving on the Board of Overseers, stated that he thought the question was whether Harvard wanted a "working president" or a man who had attained such eminence in other walks of life that he would bring prestige and honor to the institution over which he presided. Walker admitted that such a man would not consent to spend his time over disciplinary detail and the like. If a working president was to be chosen, there need be no talk about appointing a junior officer to relieve him of the detail; especially if he was to devote himself chiefly to the College. This way of stating the question implied that the President would not be expected to concern himself much with other departments in any event.[1]

If Harvard had been under strong guidance during the years that preceded 1869, so many questions of policy and purpose would not have seemed to be involved in the choice of a new president. The Corporation had chosen four presidents in succession who had been indifferently successful, and it had allowed these four to lead it through many vacillations of policy. The Presidency had, in fact, declined in dignity. Nothing could detract from the per-

[1] The *Boston Daily Advertiser*, Jan. 8, 1869, reported Dr. Walker as saying in a meeting of the Overseers that "He belonged to that class of the Alumni who thought that the academic department of the College was the great object of interest; the others were appendages and like machines which almost go of themselves."

sonal prestige of a man like Edward Everett, but Everett had won his fame elsewhere, and after a short five years in the Presidency of Harvard had resigned in disgust, letting it be known that he was unwilling to spend his health and strength upon petty routine any longer. Jared Sparks had resigned in a similar state of mind. Everett, discovering an old letter in which Ames had declined the Presidency, exclaimed, "A wise man was Fisher Ames."[1] Wayland of Brown used to say that a college president's time was "nibbled away by ducks." When Edward Pearce spoke to Dr. Walker about the Merrimack Mill's invitation to Eliot to become their superintendent, Walker, who liked his joke and whom Pearce enjoyed quoting, had replied: "It is an honorable way of getting one's living, and that is about all that can be said of any calling. There is the presidency of Harvard College, a most detestable place, and yet an honorable way of getting one's living."

Eliot, who had been elected to the Board of Overseers in July, was present during the discussions about the duties of the President, and spoke once at least and briefly; but he appears to have taken no important part in the not very conclusive proceedings that ended in the Board's vote (on February 25) authorizing the Corporation to proceed to elect. Then, if it had not done so already, the Corporation informally offered the Presidency to Mr. Charles Francis Adams, who had recently returned from

[1] 1851. See H. B. Adams, *Life of Sparks*, II, 437 note (quoted in Thwing, 269); also 472.

his mission in England; but Mr. Adams declined without hesitation or delay.

A fortnight later, during the morning of March 10, the Overseers held a meeting at the old Medical School in North Grove Street. There was no business except to pass a few items of routine and approve the granting of degrees to a list of about seventy medical students. Eliot attended, and one wonders what his thoughts were that morning. Perhaps he was reflecting how little the recommendation of the Medical Faculty signified concerning the real competence of the young men who were being made doctors, and was wondering how the School could be reformed. Very likely his mind was elsewhere entirely, for his heart was heavy within him. At home his wife's long illness was drawing to its fatal end. He had cared for her with the utmost devotion, but to no avail. Since they had been married, just after his father's failure, he and she had shared hopes, disappointments, anxieties, and sorrows, and had twined themselves into each other's lives. Her outgoing cheerfulness and gayety were qualities that he lacked in himself and that he dumbly craved. Inside the non-conducting integuments that encased him,he felt the same affections and longings that other men expose; she had fed them and poured light and warmth into inert recesses of his being. She had been the romance of his life. The future without her must have looked like an empty lonesomeness. In the presence of death and that emptiness a man learns what life means, and what love.

The quiet voices of the Overseers murmured the formal responses that were required for the records. Such proceedings make no claim on the attention. But at a certain moment Eliot became aware that the door of the room had been opened and that somebody wanted him outside. There was the Reverend George Putnam, one of the Fellows. He had come to say that the Corporation wished to elect Eliot to the Presidency. Would he accept?

Eliot knew all about the Presidency, and knew well how much there was to be done. He needed to make no inquiry about the nature of the office that was offered him. Also he knew himself and could measure his qualifications. But, at this moment at any rate, he felt the need of advice and confirmation of his own thought. That evening he consulted ex-President Walker, whom he used to help make up agenda for the meetings of the Corporation, and who used to interrupt the Faculty to say, "I think we had better pause for a few minutes and ask Mr. Eliot to draft a resolution." Walker had worn the harness and had chafed under it; he was also blessed with wisdom. And Walker urged him to say Yes. The next morning he saw Theodore Lyman. Lyman's diary preserves an entry which is both touching and prophetic.

'*Thursday*, March 11, 1869. A note from Charlie Eliot called me there. He came down sadly and said Ellen was very low, and her life was now measured by hours. I told him that time and occupation of mind were the only things to deaden such trouble. Religion I do not wish to

intrude: — that is a secret and silent comforter. — He then told me they had offered him the Presidency of Harvard College, and he called me for consultation! — He doubted of accepting, because 1. Some would oppose — [Louis] Agassiz and others. 2. He was very young. 3. He now occupied a place in another institution and might not come in fittingly. 4. This was a public position and the mark on his face might take from its dignity. I debated each of these points and advised him to accept, promising to stand by the Museum with Alex [Agassiz]. He said he had consulted with Dr. Walker and, with my encouragement, he would now accept. Even in his affliction, I could see he looked back on his literary career; his troubles at the college and his present promotion, for he said in a quiet voice, "It is a tremendous success!" I put my arms round him and kissed him. He will succeed and will advance the college, by his firmness, indomitable labor, entire method, and by his justice. Popular he will be only moderately; for his is a cold disposition, save to intimates. At times he will lack breadth, but will make up in intensity. A sad curtain now drops on his early manhood and his first love; but he may be reserved for a noble career."

Eliot communicated his decision to the Corporation straightway. A little less than six years had passed since half of the gentlemen who now composed it were making up their minds to deny him the Rumford Professorship. The morning after March 12, they convened and for-

mally elected him subject to the concurrence of the Overseers.

His wife was conscious and could still be spoken to. When he told her what had happened, she understood and whispered, "That is a big hole for my boy's boots to fill." Then — the next day — she was gone.

The news of the Corporation's choice was made public on the 18th. James B. Thayer, not then connected with the University and not yet the distinguished legal scholar that he later became, wrote immediately and exclaimed: "How *could* those old gentlemen have done so good a thing as this! All one's best hopes for the College revive with this news." Colonel Lee, twenty years Eliot's senior, and a member of the Board of Overseers at the time, wrote a letter which follows.

Henry Lee to Eliot

Mar. 18, 1869

My dear Charles, — The night has often gone down on my wrath, but I do not mean it shall go down before I have let out to you my joy at your nomination by the Corporation as President of Harvard College.

I told you twice that you had more influence with the Corporation than any member of our Board. It seems to be true. You enlarged upon the power of a President and that power you will exercise well, because you are single hearted, because you are capable of learning and resolved to learn what you do not know, and because you are cap-

able of acknowledging yourself in error and correcting it without reserve.

I know you and your race back to your good grandmother; you are not perfect, but you may be some day, chastened as you have been in various ways, and that is more than I can hope for many. Your friend

HENRY LEE

It has been explained that a concurrent vote of the Overseers was necessary to the validation of the Corporation's choice, and it is a familiar bit of Harvard history that, for a while, the Overseers declined to concur. It has already been indicated that so many questions about the future of the University were in the air that any nomination would have excited opposition in some quarter. Eliot's was by no means the least provocative that might have been made. He was young and looked like a man who would not hesitate to wield any power that was entrusted to him. If the Reverend Thomas Hill, with his gentle addiction to mathematics and astronomy, had frightened the champions of conservatism, how much more should Eliot! Look at his "Atlantic Monthly" articles, just out. They were the work of an advocate of "practical education," and in them Eliot said, "The vulgar argument that the study of the classics is necessary to make a gentleman is beneath contempt." [1] Their

[1] These papers appeared in the February and March numbers of the *Atlantic Monthly*. It has been said that they brought Eliot into prominence as a candidate; *per contra*, that they were a proof of his courage because they nearly

author was known to favor what was beginning to be called the elective system as contrasted to the curriculum system. He was supposed to have picked up foreign ideas — though what they were might have been hard to say. The conservatives were quite correct in thinking that as President he would reduce their influence. But the Agassiz-and-Peirce group that had preferred Gibbs for the Rumford Professorship, six years before, were misleading themselves when they began by opposing him. They were urged to see that, and finally they were warned that if it was not to be Eliot, it might have to be the Reverend Andrew P. Peabody. The Overseers referred the nomination to a committee on the 18th of March, met again on the 7th of April and received a favorable report from the committee; discussed the nomination and, "as the affair plainly was not ripe," adjourned to resume the discussion on the 21st. Then several motions to refer back to the Corporation and to adjourn again, which seem to have been offered by the opposition and to have been regarded as tests, were all de-

ruined his chances of election. The only thing that is certain is that he offered the articles to the *Atlantic* shortly before November 11, 1868. President Hill's resignation had been announced six weeks before. But I am advised that the old correspondence files of the *Atlantic* indicate that the articles were already partly if not wholly written out. If such was the fact, there seems little reason to suppose that Eliot wrote them with any thought of their improving or hurting his chances of being elected to the Presidency. In November it was to have been expected that a president would be chosen before "The New Education" appeared in print. The articles dealt with a subject that was of vital interest at the "Tech," namely, technical education. Had Eliot wanted to impress the Harvard world by publishing an educational paper, he should have chosen a different subject.

feated by eleven to nine. There followed a tie vote on another of these motions. Then William Gray, of the opposition, "suddenly proposed" a previously defeated motion to refer back to the Corporation and it was passed by eleven to ten. "Everybody looked at his neighbor! and was surprised," said Lyman in his diary, adding, "I went straight out of town — feeling cross! — Wrote Eliot a note saying that by a trick the matter was thus blocked; that he had a majority in the Overseers from 2 to 5.... I advised him to put himself in the Corporation's hands with a single eye to the interests of the College."

When the Corporation returned the same nomination to the Board on May 19 an informal poll showed fifteen favorable to Eliot's election and nine still opposed. The formal ballot which immediately followed came out sixteen to eight.

While the discussions were going on in the Board of Overseers, Eliot met Francis Parkman on the street one day. The historian was an old family friend, also a fellow member of the Board. Their talk, as Dr. Walcott has repeated it from Eliot's report, ran thus: "I suppose you ought to understand that I was in favor of another candidate for the Presidency" — and Parkman named his candidate [Ephraim Gurney]. Mr. Eliot at once said: "He was my candidate; he is my friend and I wanted him to be President. I have never sought the nomination; I don't want it. I was too near President James Walker during his administration, I saw enough of the troubles of Dr. Hill

during his presidency, not to be aware of the burdens of that office, and I don't care to assume them. I am content with my present position and in the saddened state of my household I have no thought of seeking another." Eliot told Mr. J. D. Greene that Parkman informed him subsequently that this conversation determined his vote, and furthermore, Eliot believed that Parkman thereafter had some influence in turning other votes to him. It is easy to understand why Eliot should, at that moment, have felt indifferent to the outcome of the contest; but less plain why his indifference should have seemed to others to be an argument in his favor. Yet such appears to have been the fact.

A quite exaggerated notion of the Overseers' opposition has become current. Perhaps it should be regarded as what Dr. Johnson called "an instance of the natural desire of man to propagate a wonder." Said Eliot himself, in 1913, "The Overseers by a large majority returned my election to the Corporation, adopting this quiet, but as they supposed decisive way of rejecting it." [1] To speak of a decisive rejection was inaccurate. The vote of April 21 was not "by a large majority." That the erroneous account of it should have been so long uncontradicted is partly explicable by the fact that the official minutes of the meeting of April 21 do not record the count of votes. There seems to be no reason for doubting the accuracy of Lyman's diary, however.

[1] Autobiographical sketch in the *Sixtieth Anniversary Report* of the Class of 1853, at page 106.

The victim of so much talk might have been disgusted if not resentful, but it was not his way to resent honest opposition and his replies to the congratulations of two friends at the Sheffield Scientific School show how sanely he took the whole affair.

"... The main objection to my confirmation came from men who thought it safer to trust a literary man or a minister to be just to science than a scientific man to be just to literature, philosophy and art. The whole discussion has been courteous and edifying. Only the main discussion as to what to build *on top of* the American college was hardly touched upon. This is what we have all got to think about." [1]

"A victory implies that some one is defeated. That is not the true aspect of my election. It is simply an experiment, made by the governing boards of the University in a spirit truly scientific, I think. The greater part of the crowning will have to be reserved for the issue from the woods ten or fifteen years hence. As you say, the first and best thing to be done is to show that letters and science are not mortal enemies but helpful friends. There are many comical aspects of this anomalous thing — e.g., in fifteen minutes I am to 'receive' a visit from a joint committee to inform me of my election. Ralph Waldo Emerson is, I believe, the youngest and least imposing of the members of the said committee. Query — what *are* they going to say or do? Pat me on the head, doubtless, and say 'good boy.' — 'Vision and strength' — that is well

[1] C. W. E. to George J. Brush, May 21, 1869.

said — that is just exactly what is needed. Take 'care of your stomach and reserve yourself for good days to come."[1]

"The vote of yesterday is perfectly satisfactory to me. Two thirds of the full board were for confirmation, so that it was a fair expression of opinion. As far as I have heard the objections to me, I quite agree with them. As Theodore told Edw. Hale — 'I agree with your general views, only you don't know Eliot.' The post-graduate teaching is, I believe, the first thing to come upon the carpet. A committee has been at work upon it all this term at Cambridge. Look out for a long season of debates and a laborious sifting out of the wheat by slow degrees." [2]

A. S. Hill, Eliot's classmate, wrote from Europe: "You will make a better officer now — pardon me for frankness — than you would have done ten years since. Not only because you are older, but also because you have grown broader in your views and more genial — not, indeed, in temperament, perhaps, but in its expression. In a word, the Boston in you has been extracted. I ascribe the change partly to absence from Boston coupled with your own good sense, and partly to the sunshine that your wife and children brought into your home and heart."

An anonymous prophet said in the editorial column of the "Boston Post" of March 20: "... His administration will prove a turning point in the history of Harvard, opening more extended views of a University course in

[1] C. W. E. to Professor S. W. Johnson, May 25, 1869.
[2] To Arthur T. Lyman, May 20, 1869.

this country ... and producing a body of accurate, trained and practical scholars whose influence will be powerfully and permanently felt in the entire variety of professions and avocations."

It is seldom that the path of a man's life crosses so steep and rough a ridge as did Eliot's in 1869. His thirty-fifth birthday fell on the 20th of March, a week after his wife's death and at the moment when the opposition to his election was becoming apparent. If he reviewed his situation on that day, it must have seemed to him as though he had lived through a full cycle of one existence and as if whatever might be ahead would be like another life entirely, with its own difficult beginning and its own unpredictable course and end.

In the first span of existence he had enjoyed wealth and the assurance of complete independence which it seems to give, and then had seen it all swept away in a day. He had supposed that he was about to taste success in his chosen career, and at that moment the cup had been withdrawn from his lips. Having lost the Harvard position which had been the goal of his ambition, he had come to a modest professorship in a young institution whose prospects were far from well assured. He had married; there had been four children. He had sat by the deathbeds of two of them, and after he had watched his wife's long illness with an ever sinking heart, he had lost her too. "I can still hear her voice with its bounding cheerfulness as I used often to hear it from my window,

calling to her boys." So wrote a Cambridge neighbor.[1] What ringing notes and laughter could not he hear! It would have been idle to pretend to himself that his way had been fortunate, that he had escaped unhappiness, that he had done anything brilliant. If he could hope that the new span of life upon which he was now to enter would be in any wise better, it must have been from the depths of his own strength that he drew the hope.

Looking at him from outside and appraising him in this hour of his distress, we can draw assurances from something that was in the "Atlantic" articles and that signified more than any particular controversial assertion. Written though they were at a time of sadness and anxiety, those papers were full of challenge and confidence. A reader who goes through them now will be left with the suspicion that, if Eliot had been compelled to fight as a free lance without the prestige of a high position, he would have become the hero of a page in the history of American education all the same. They gave forth a freshly stated account of what we now know as some of his cardinal beliefs concerning schools and colleges. They showed that he had grasped his subject and knew what he thought ought to be done; also that he was ready to urge his views and prepared to back them up by citing well-observed facts. They were opening words, not closing words. A reader could imagine their author as rising to his feet, but not as turning to sit down.

Tastes, aims, abilities, and on the other hand tasks that

[1] Mrs. F. J. Child to C. W. E., March 21, 1869.

test them to the fullest measure — how seldom do these match in an equal and happy union! Eliot had been a good teacher; but teaching had never absorbed him. He had become a competent chemist, and yet science was not his true love. He thought he liked his work at the "Tech"; he did enjoy it. But it was not enough. It is impossible not to believe that he possessed sufficient self-knowledge and pre-vision to have been helped through the sad and lonely months that followed March, 1869, by a sense of the significance for him of what was ahead. For he was, in truth, "escaping from the bondage of too light a task," and thenceforth the strength that was in him was never to be denied its arena.

CHAPTER VII

The condition of American colleges in the sixties — The extension of the field of knowledge — Needed, an American university — Eliot's inauguration and Inaugural Address

"For my own part my interest is now, as it always has been, exclusively in the abstract part of education. The moment a chemist tells me that such and such facts apply to the *manufacture* of a thing, there I say good-bye, for of practical things I have more than enough in my daily life. This country is a constant whirl of dollars, and railroads, and commerce, and invention. Every city is capable of a tolerable common school, or High School, or School of 'Arts et Métiers'; but it is only at such a place as Cambridge, with its atmosphere of learning and its learned memories, that we may hope for a *University:* — a place where the grander harmonies of the Universe may be studied, whether those harmonies be illustrated by the relations of Languages, or of the Mathematics; or of the Animal or Vegetable, or Inorganic Kingdoms. Until we have such a place, we are an imperfect Nation; excessively developed on the side most wanting among Europeans, but stinted on the side where they are excessively developed. Such is the educational need which I, in my lazy and slow way, have always followed. Had I your energy I would have made more progress with my building." — Thus Theodore Lyman to Eliot, March 8, 1868. Eliot's energy was now to be given the best of opportuni-

ties. But even in Cambridge he had to begin to build by remaking the foundations of the old structure, and it would be impossible to understand the significance of what he did without first taking account of the condition of the American colleges in 1869.

It distressed F. A. P. Barnard, the President of Columbia College, who was looking about him with an anxious eye in 1869, to discover that relatively fewer instead of more Americans were going to college. He found that the New England States had one boy attending college for every 1294 of its population in 1838, and that the ratio had declined to one for every 1689 in 1855, and one to every 1927 in 1869. The records of twelve New England colleges showed that the combined total enrollment in their classical or collegiate departments had increased by only three and one third per cent from 1855 to 1869, whereas the New England population had grown about five times as fast during the same period. But Harvard stood out in these tabulations as quite exceptional. She alone accounted for more than all the increase of the combined twelve. If Harvard were eliminated from the list entirely, the totals for the remaining eleven showed a falling-off of nearly six per cent. Barnard thought that the value of a college education had been declining in popular estimation because the curriculum had generally not been liberalized fast enough to keep pace with the times. The colleges were not supplying what the community wanted. The exceptional case of Harvard seemed to confirm his belief. During the growth of what he spoke of as the de-

mand "for a new form of higher education," Harvard had, he remarked, "been progressively more and more completely identifying herself with the cause of the new education." [1] Barnard's comment reflected the current opinion that Harvard was moving forward. But in attributing her growth to recent changes in her college curriculum, he exaggerated their effect. Harvard's reputation for progressiveness was due to other things than a few elective courses in the College. She had, to be sure, made a striking beginning in the field of science by attaching a group of famous scientists to the University, and that was generally even if vaguely understood; but their work was almost entirely confined to Agassiz's Museum and the Lawrence Scientific School, and they had no vote on questions of College policy. What could be said justly was only that these, and three or four men in the College Faculty who were imbued with a modern spirit of scholarship, had refreshed and liberalized the Cambridge atmosphere, and that Harvard was fortunately seated within a bright circle of illumination that was diffused by the literary lights who were clustered in Boston, Cambridge, and Concord. Such were the real reasons that had warranted Thomas Hill in saying, in his last Presidential Report, that there was no place in the country where it would be easier to establish "a university of a high order." These great advantages were lacking at Ithaca and Ann Arbor, where Cornell and

[1] *Rep. of Pres. of Columbia for 1870* — particularly pp. 44 and 62–63. Barnard discussed changes in the character of the population and in the distribution of wealth and concluded that they did not account for the relative decline in college enrollment.

the University of Michigan were setting out to become true universities.

But if any one chose to draw comparisons of a different kind, and to consider what might be instead of what was in Cambridge and elsewhere, the best that could be said of Harvard College appeared to be that she was leading a column of laggards. The number of people who were convinced that the procession was advancing too slowly had been growing for a generation, and had increased rapidly since the Civil War. It included cultivated men, like Theodore Lyman, who made no professional pretensions, as well as others like Andrew D. White, D. C. Gilman, and President Barnard, whose business it was to teach or to organize instruction and who had their arguments ready at their tongues' ends. They took the measure of the colleges too accurately to be satisfied by what had been done even at Harvard. To say that a Harvard student could choose half his courses during his last three years in college sounded well, but closer scrutiny revealed only a meagre offering of options.[1] He might read one Greek or Latin author rather than another; he might study more mathematics or less. He might, on the other hand, somewhat reduce the proportion of time spent upon these subjects and devote more to political economy, or philosophy, or science, or modern languages. Yet if he made that attempt, he could rarely get beyond the rudiments and, if he tried political economy or philosophy or history, would find that he was being taught in a poor

[1] An examination of Appendix A will show how meagre it was.

fashion. So when people stated, as they sometimes did in a tragic manner, that the question was whether Latin and Greek were to be discarded or dishonored in the places where they had been cultivated, they blinked the main difficulty. The real question was whether colleges were to be groups of schoolmasters engaged upon a disciplinary course of elementary teaching, or were to become places in which a spirit of eager and universal inquiry sought the meaning and beauty of language, literature, history, science, and philosophy alike.

The classics, in spite of their traditional monopoly of the place of honor in the curriculum and for all the lip-service that was paid them, had become primarily grammatical disciplines. When, here or there, a teacher invited his classes to enjoy the Greek and Latin authors in a truly humane way, as did George M. Lane, for instance, he was regarded by his pupils as a blessed exception to what they must expect.

A product of the old order once exclaimed to William James: "I can't understand your philosophy. When I studied philosophy, I could understand it. We used to commit it to memory." That was largely if not literally true of all teaching in the moral and political sciences in American colleges. There were definitions and principles from which certain deductions were expected, or, in effect, demanded. Furthermore, these subjects were taught from inferior textbooks and, in most colleges, with a strong sectarian bias. A university, as Eliot said, "cannot be built upon a sect, unless, indeed, it be a sect

which includes the whole of the educated portion of the nation." [1]

Natural science, so far as its door stood open to young Americans, was not presented much better. The first effort to make room for the sciences, at Yale as well as at Harvard, had resulted in the establishment of a scientific school collateral to and distinct from the College. The effect of thus providing for science alongside of the College had been to facilitate a conservative reaction in the academic department rather than to expand and diversify the course that led to the degree of Bachelor of Arts. In 1868, Josiah P. Cooke was the only teacher in Harvard College who taught science in a modern way. He had organized a chemical laboratory and had so arranged a collection of minerals that his students could see, touch, smell, and manipulate as well as read and listen. Agassiz, Jeffries, Wyman, Gibbs, Asa Gray, J. D. Whitney — men whom it would have been a liberal education to work with — gave no regular instruction in the College, although they did deliver a few lectures which volunteers might attend without receiving academic credit. In spite of the almost overshadowing eminence of these men who taught in the Scientific School, the degree of Bachelor of Science did not command the esteem to which it might have been entitled. The Scientific School pursued the policy of attracting students by making entrance and graduation easy. Its product was manifestly crude in quality. The College looked down upon it with reason. Its brilliant but some-

[1] Addresses at Inauguration of D. C. Gilman, 1876. *Educational Reform*, 43.

what erratic Faculty were doing practically nothing to solve the problem of organizing a solid education with a scientific instead of a classical bias. In the Lawrence Scientific School a man who was enrolled in the Engineering Department might not study chemistry, and reciprocal restraints were imposed on the curiosity of students in the Chemical Laboratory. This might imply special training, but it was a frustration of education. At Yale the condition of science was much the same. In other colleges it was different only by being inferior, because their students lacked even the opportunity to gaze admiringly at such famous scientists as were to be seen in New Haven and Cambridge.

A student might read the literature of our own language privately, but it was not a subject of instruction. The Harvard Catalogue of the year 1868–69 shows that one elective study was offered under the heading "English" in each of the Sophomore, Junior, and Senior years. In these classes the students studied progressively Vernon's "Anglo-Saxon Guide," Morris's "Specimens of Early English," Chaucer's "Prologue" and "Knight's Tale," Thorpe's "Analecta Anglo-Saxonica," Mätzner's "Alt-Englische Sprachproben." In other words, Professor Child provided an introduction to the reading of Anglo-Saxon and Chaucer. There, so far as English literature was to be considered, the College stopped.[1]

The modern languages could not be said to be on a solid

[1] Compare Charles F. Thwing, *History of Higher Education in America*, 441–43, citing the entire omission of "literature" from the Yale curriculum in the fifties.

footing, although they set up certain pretensions in the college catalogues. Their teachers were always wrestling with the initial difficulty that very few undergraduates could read French, German, or any foreign tongue; so they had to be started at the first page of a grammar. One of Longfellow's principal duties as Professor of Belles Lettres had been to supervise the work of five tutors who taught beginners in French, German, Italian, Spanish, and Portuguese. Lowell, his successor, stipulated for exemption from such labors. For years W. D. Whitney, Professor of Sanskrit and Comparative Philology at Yale, taught beginners in French and German six mornings a week.[1] Longfellow had delivered lectures about the history and beauties of foreign literature, but translated any passages he wanted his hearers to understand. They noted that he was the best-dressed member of the Faculty, that his manner was charming, and — particularly — that he broke away from the time-honored practice of calling boys by their bare last names and inaugurated the custom of addressing them as "Mr. Jones" or "Mr. Smith." It was doubtless a civilizing experience for his young auditors to listen to his lectures, or to those of his successor; but how much did they learn? How far could Longfellow succeed in conveying to them the beauties of Dante, Racine, or Calderon? What his teaching necessarily lacked in depth was made up for by its scope, however. The Professorship of Belles Lettres was understood to embrace everything since classic times — Italian, Spanish, French, German. Long-

[1] Chittenden, *History of Sheffield Scientific School*, 81.

fellow liked to glance at Swedish, Danish, Icelandic, and I know not what other literatures besides. By 1869 the teaching of modern languages and literatures had, to be sure, developed a little beyond the stage reached in his time; but still only a very little. Generally speaking, most modern-language classes were on a high-school level.

A glance at the faculty lists of a few American colleges will show what their characteristic limitations were. The typical teaching staff was composed of a dozen to eighteen men including both the president, who always taught or preached, and all tutors and junior instructors. This was because the prescribed course of study could not be administered to four college classes by less than a dozen teachers, while more than a dozen and a half would have been an extravagance. Harvard alone had more, twenty-seven in fact; but Harvard was growing. "Christian Morals" or "Natural Religion and Moral Philosophy" or "the Harmony of Science and Revealed Religion" were likely to be inculcated by more than one professor. One third of the staff, on the average, would hold appointments to teach these subjects and Latin and Greek. On the other hand, one man might be, at one and the same time, the German Department and the Professor of Roman History. One finds "science" named in the titles of a number of professors, but physics, chemistry, zoölogy very seldom.[1]

The men who taught the modern languages and expounded their literatures are usually to be discovered to-

[1] See further, Appendix B.

ward the end of the faculty list, as if they were luxuries not permanently provided for in the budget, or strangers camping at sufferance on the stoop. Those who bore foreign names frequently appear to have held junior appointments of short duration which did not entitle them to vote in faculty meetings. One divines that foreigners were felt to be out of place in those tight little groups that determined the curriculum and administered discipline. Perhaps, too, the stipend that was paid to a German instructor who taught declensions and conjugations to beginners did not suffice to attach him to the college for long if he was much of a man.

What President Tucker once said about Dartmouth in the sixties might have been said of all the other colleges at that time. The curriculum offered "little change from the studies of the preparatory school during the first two years." "The college acted constantly through its totality. Whatever it had to offer intellectually or morally, it brought to bear in its unity upon every student.... The old-time faculty was a group of scholars of similar training, and pervaded by a common educational purpose." [1] In short, the college furnished a discipline of a particular sort, rather than opportunities for or guidance in self-education. Discipline colored everything. The students regarded their teachers as drill masters and the inflicters of punishments. The sport of outwitting them afforded constant and pleasurable exercise and was occasionally heightened by the excitement of an impudent prank. It

[1] Quoted by E. B. Greene, *A New-Englander in Japan*, 37.

was still bad form, as it had been when Eliot was an undergraduate, for a student to enter into unnecessary conversation with a teacher. The instructors on their side made almost no attempts to break through the social barrier which divided them from their pupils. C. F. Adams said of the college of his own undergraduate days: "Our professors... drudged along in a dreary humdrum sort of way in a stereotyped method of classroom instruction. But as for giving direction to, in a sense of shaping, the individual minds of young men in their most plastic stage, so far as I know, nothing of the kind was ever dreamed of." [1] His remarks would have been equally appropriate at the end of the sixties. So inhuman were the relations between teacher and taught that talk about the "humanities" as the one sweetest nourishment for college boys may well sound to us like an irony of language. The old order of things, said President Hyde, had resulted in "a hidebound uniformity, a dead prescription, a dogmatism of second-rate minds, a heterogeneous aggregate of unrelated fragments of instruction, elementary from beginning to end." [2]

[1] *Charles Francis Adams, An Autobiography*, 35. Adams was in college from 1852 to 1856.

[2] W. DeW. Hyde, "President Eliot as an Educational Reformer," in the *Atlantic Monthly* for March, 1899. (Slightly condensed from page 349.) It may occur to the reader that Cornell and Michigan ought, in fairness, to be recognized as differing widely from the typical American college of the time. Cornell's aim was to found "an institution where any person can find instruction in any study," and F. H. Hedge, writing in 1866 (*Atlantic Monthly*, XVIII, 299) and speaking of the regulations in the Medical Department at Michigan, called it "the only seminary in the country whose liberal scope and cosmopolitan outlook satisfy the idea of a great university." It is true that the

How could a succession of brilliant men have been produced by this system? The question forces itself upon one; but, obviously, it involves an assumption. Were their minds formed, were their abilities trained, by the colleges? Concerning one of them, Eliot, the reader shall judge. Leaving his case out of account, we may note that he once discussed the question in the light of other personal instances.

"How did it happen," he asked, "that among the graduates of Harvard in the first half of the nineteenth century there appeared historians like Jared Sparks, John G. Palfrey, William Hickling Prescott, John Lothrop Motley, George Bancroft, Francis Parkman, and Justin Winsor; essayists and poets like William Ellery Channing, Frederick Henry Hedge, James Freeman Clarke, Ralph Waldo Emerson, James Russell Lowell, Oliver Wendell Holmes, Thomas Wentworth Higginson, and Charles Eliot Norton; orators like Edward Everett and Robert Charles Winthrop; jurists like Joseph Story, Lemuel Shaw, and Richard Henry Dana; and such scientists as Benjamin Peirce, Jeffries Wyman, and Benjamin Apthorp Gould? These all took the degree of A.B. at Harvard while the entire course of instruction was prescribed, and

governments of both institutions were already guided by what was soon to be commonly spoken of as the university idea; in that respect they were truly pioneering. But Cornell was in its swaddling clothes. As to Michigan, Professor A. O. Norton, who once looked into the matter, assures me that if what was actually being required of her students or offered to their choice is considered, the conclusion emerges that Michigan, handsome though her aspirations were, had not yet got away from the type of her sister institutions.

therefore elementary and superficial in every subject. Nevertheless, they all became distinguished as authors. Should not such results raise our low opinion of the course of study they were compelled to pursue? It ought to be observed, in the first place, that a large majority of the authors named above added to their college course a professional training. Eight out of the twenty-three were trained for the ministry, at that time the best educated profession.... None of the famous men mentioned above procured his real training for his great work in after-life within the college program. They all had outside sources of information and inspiration. This was emphatically true of my classmate Justin Winsor, who had written his 'History of Duxbury' before he was nineteen years of age." [1]

If the question be, not, How did an Emerson or a Story or a Winsor come to be? but, How came it that there were many cultivated gentlemen among the alumni and that they looked upon the old College with gratitude and affection? — the comment is, again, that the manner of the inquiry solicits too simple an answer. For one thing, it was distinctly the purpose of the former discipline to turn out gentlemen of an accepted model. Certainly, too, the old curriculum suited many individuals. But, on the other hand, we know that human nature, which is forever manifesting its richness, implants in a fair number of men a native aptitude for making themselves into "cultivated"

[1] C. W. Eliot, "Contributions to the History of American Teaching," in *Educational Review* (Nov., 1911), XLII, 358–59, 360.

people whether with or without the aid of four years in college. New England's moral and intellectual stirrings during the first half of the nineteenth century were felt in the homes in which most of Harvard's students grew up, and influenced them outside the classroom, if not in it, until from boys they had become mature men. A bright boy could easily keep ahead of the classwork that was prescribed for the undergraduate mass; so he could, and often did, read in a browsing way, or in vagrant discussions polished his mind against the intellects of his fellows. That, too, was education, though not named in the curriculum. When Langdell said that before Eliot's time the College "exacted from the students as little as possible," Choate exclaimed, "Who knows but that the less they took out of us the more they left in us?" Rarely, but still occasionally, in spite of undergraduate prejudices, a Harvard student attached himself in an irregular fashion to some inspiring teacher. In that manner Eliot spent his spare time in Cooke's laboratory, and another classmate of his led a few of his companions up to the Botanical Garden and studied plants under the supervising eye of Asa Gray. The little elective classes that were composed of men who knew enough Italian to study Dante with Longfellow, or read the "Divine Comedy" with Lowell in his library at Elmwood, have become famous. But very few students gained admission to those classes. That was one reason why they were so gratefully remembered by the few.

There were, indeed, not many who enjoyed any such chances to drink at the well-springs, for there were hardly

any advanced classes for undergraduates and no facilities for post-graduates that were worthy of being so called except in the professional schools. Holders of the A.B. degree who were in residence in 1868–69 numbered five. At Yale that year they numbered eight, and the next year two. At Princeton, Columbia, Brown, and the University of Pennsylvania there were none. If Bachelors of Art were ambitious to continue studying, the sensible thing for them to do was to manage somehow to get to Europe.

The consequences of having no advanced classes were quite as serious for the teachers as for any one else. A man who spent his life drilling rudiments into boys who, most of them, brought no enthusiasm for the particular subject into the classroom, might become a good teacher of the rudiments and so a useful member of society, but it could hardly be said that his occupation was that of a scholar. The virtue of an institution of learning lies in the quality and attainments of its faculty. In the days before special provisions for the support of research, a faculty was in bondage to the institutional conception of what the students must be taught. If no effort was to be made to carry students who had special ambitions on to advanced studies, the members of the teaching staff were not likely to have opportunity to do advanced or original work themselves. The college libraries and laboratories would not be made into suitable workshops for their possible endeavors, and, as a seat of learning, their college would be sterile. Of course there were exceptional men who surmounted all difficulties. Louis Agassiz, sanguine, tireless,

able to inspire enthusiasm for his projects, could create a department of his own, carry on his work in his own way, and induce people to subscribe money for his expeditions, museums, and assistants. But the biographies of such aberrant instances show how hard it was to escape the operation of the general rule. Among the officers of instruction whose names appear in the Harvard Catalogue of 1868–69, there were, to be sure, an unusual number whom we now think of as scholars and men fitted to raise up scholars — Louis Agassiz, Asa Gray, Jeffries Wyman, Josiah D. Whitney, Wolcott Gibbs, Benjamin Peirce, James Russell Lowell, Evangelinus A. Sophocles, Josiah P. Cooke, Francis J. Child, W. W. Goodwin, George M. Lane, James Mills Peirce. They constituted an excellent, in some respects a brilliant, nucleus for a real university to start with. But the first five, as has already been said, had almost nothing to do with the College; and the last four were able to make their best contributions to learning and to Harvard after 1869. In fact, the more closely one examines the histories of this striking group of men, the more unreasonable does it appear to cite them in support of a case for the old curriculum. Agassiz, Whitney, Gibbs, and Lowell did the greatest part or all of the work on which their reputations rest in some other capacity than that of Harvard professor. Asa Gray, like Agassiz, created his own workshop.

Such were the American colleges, and Harvard among them, at the end of the sixties. If some called themselves universities, either to express their good intentions or be-

cause their trustees had taken a few professional schools under their control, the name was none the less a misnomer. There will be a better occasion to speak of the medical schools and the other special schools later, and so it is unnecessary to do more now than to remark that their standards were very low. Nothing can make a university without scholarship, learning, and high standards.

Eliot was not the first American, nor for that matter the first college president, or the only Harvard man of influence, to preach the necessity of widening the scope, deepening the work, and liberalizing the spirit of the American colleges. On the Continent of Europe the word university implied what American colleges were aiming at when they turned toward the elective system. In this country the first persuasive advocate of an elective system was Thomas Jefferson. George Ticknor, influenced by Jefferson and by his own experience in Germany, led a movement which effected a measure of reform at Harvard in the twenties. President Francis Wayland of Brown[1] and F. A. P. Barnard of Columbia have already been mentioned. In New Haven the men whose names are inseparable from the early history of the Department of Philosophy and Arts, notable among them being the younger Silliman, John A. Porter, George J. Brush, W. D. Whitney, O. C. Marsh, and James D. Dana, had held fast to their

[1] Eliot placed Wayland high in the list of men who contributed to the gradual transformation of American institutions of higher education, although after he retired in 1855 his successor in the Presidency of Brown turned the clock back toward the prescribed curriculum. See Wayland's *Thoughts on the Present Collegiate System* (1842).

ideal and had accomplished as much if not more than had been achieved anywhere else in the way of providing opportunities for advanced work during the middle decades of the century.[1] After the Lawrence Scientific School was opened and President Sparks was inaugurated (1849), a strong conservative reaction recaptured much of the ground that the progressives had won during the previous twenty-five years. But after that there were always a few men in the Harvard Faculty who openly advocated reform. In 1866, F. H. Hedge, then Professor of Ecclesiastical History, delivered an address before the triennial gathering of the Harvard Alumni to which — and to almost every word of which — the Eliot of later years could have said Amen. He characterized the College as "a more advanced school for boys," in which the principle was coercion, the professors were taskmasters and police officers, and the President "the chief of the college police." He thought the time had come to do away with coercion. Advance the admission requirements, said Hedge, or make the Freshman year frankly a year of probation; then give students freedom to select their own subjects and their own teachers. He argued that such freedom was indispensable to intellectual growth; that the classics were being overvalued; that there should be more opportunities to study modern literature including that of our

[1] Eliot said that Yale's Department of Philosophy and Arts was "entitled to the credit of having first established a creditable course of instruction for the degree of Doctor of Philosophy in the United States." The Sheffield Scientific School grew up as part of this department. Its students accounted for most of the enrollment. True graduate students were usually few.

own language, to study science and moral and political philosophy, and also to study American history. In short, the College should strive to offer opportunity and inspiration instead of applying compulsion — and, laying off "the *prætexta* of its long minority," should "take its place among the universities, properly so called, of modern time." [1]

There is no single reason why these efforts had not succeeded better, except one that hints at much without saying anything clearly. The time was not yet ripe. There was not enough money in any of the colleges to support more teachers than were absolutely required by the traditional curriculum. There were not enough people in the country who desired anything better ardently enough to provide for it. During the six decades from 1789 to 1850, about one hundred Americans — no more — found their way to the Continental universities.[2] This was an average of less than two a year. (At first there were fewer than two; toward the end there were a good many more.) Even after large allowances are made for the number who would have liked to go to Göttingen or elsewhere but

[1] Hedge's address on "University Reform" was printed in the *Atlantic Monthly* for September, 1866 (XVIII, 296). It struck at the heart of Harvard's problem more directly than did Eliot's *Atlantic* articles three years later — for they were not especially addressed to Harvard's problem — and, re-read today, it seems remarkably prophetic. Andrew D. White alluded to it as "notoriously [*sic*] . . . the beginning of a new order of things at Harvard." ("Advanced Education." A paper read before the *Nat. Educ. Assn.*, Aug. 5, 1874.) This allusion was quite incorrect historically.

[2] B. A. Hinsdale, "Notes on History of Foreign Influence," etc., *Rep. U.S. Com. of Educ.* (1898), I, 591. Also quoted by Thwing, *History of Higher Education.*

could not manage to, these small numbers are undeniable evidence that the American mind was intent upon other things.

But after the Civil War there came a change. The inauguration of an American experiment in university-building in some one of the older and richer communities awaited only the men to direct it. It was not the place that mattered most. The right leaders might have done the work in any one of several institutions. If somebody like the Reverend Andrew Peabody had presided over Harvard during the seventies in place of young C. W. Eliot, and if D. C. Gilman had been made President of Yale instead of Noah Porter in 1871, the first American university would have grown up in New Haven instead of in Cambridge.

Eliot continued to discharge the duties of his professorship at the "Tech." until the summer vacation ended the academic year. He also continued to live at Chestnut Hill, just outside Boston, until the autumn term began in Cambridge. Work was his refuge from sorrow and he worked day and night. The first task was to prepare an inaugural address. He wanted to consult Professor Brush of the Sheffield Scientific School and explained: "My responsibility in stating the case between the new and old education (to use a phrase of which I am getting heartily sick) oppresses me. I can't dodge it in my inaugural and want to state it just as you and Johnson would approve. I don't know anybody who has a better right to a sound opinion

on this subject than you. Therefore I want to consult you face to face." Apparently Eliot was afraid of gossip, for he added: "I should hardly like to come to New Haven, because it could hardly be done without exciting observation — which might be inconvenient. Can you come to Boston for the night? Or I will meet you at Springfield when you please." Whether for reasons of convenience or in order not to be outdone in circumspection, the Yale contingent preferred the neutral ground, and Eliot wrote again:

"I will come to Springfield.... If Whitney or [D. C.] Gilman could be there too, so much the better, provided that our talk could be as frank and confidential in their presence. Whitney is a very tight vessel, I believe. Is Gilman? What I want to know is — how the École Centrale education and the ordinary American college education are to be made to understand and respect each other. Also how scientific education in this country is to be improved. Also what higher opportunities of culture are needed in this country than colleges and scientific schools now offer. Also how the calling of professor is to be made more attractive to ambitious young men."

Who was present and what was said is not known; but on October 19 the inauguration took place in the wooden meeting-house which faces the western entrance to the College Yard and is known in Cambridge as the "First Parish Church."

The occasion was marked by what must have impressed the spectators as pomp and ceremony, even though aca-

demic gowns were not then worn except by the President. The procession, which formed beside Gore Hall, was led by a band. The members of the Corporation appeared in dress-coats. The Governor was present with his aides and an escort of lancers. Ex-Presidents Walker and Hill marched side by side; Lowell and Longfellow, arm in arm. The new President walked with Dr. Andrew P. Peabody. When "the more grave and sober alumni" had entered the church, "the increased velocity with which the body began to move denoted the approach of the undergraduates, the Sophomores being distinguished by the mass of beaver hats which covered them. The Freshmen brought up the rear, rushing up the steps like a flock of sheep." Thus wrote the reporter of the "Boston Advertiser." By half-past three the church was packed full. The reports of three members of the audience are happily quotable.

From Theodore Lyman's Diary; Wednesday, Oct. 19, 1869

A great day for the family! Charlie Eliot was inaugurated as Prex of Old Harvard, at 2.30 P.M. The weather was raw though not rainy: — despite which there assembled such a crowd of both sexes as filled the church jam full. The procession was under Leverett Saltonstall who did up the thing very quietly and in good time and order. — At 2.30 we formed and a little after 3, we were all seated, I, of course, among the Overseers; while Arthur [Lyman] assisted as a marshal. The galleries were quite filled with ladies and the body held many dis-

tinguished people.... The Governor [William Claflin] came out, as of old, with the escort of Lancers; and sat on the platform looking much interested. After Music and Prayer, Gov. Clifford — as President of the Overseers — addressed the President elect and handed him the seal, keys, and charter. I was surprised at the weakness of this paper (which he read) — It was in form of a lecture to the new Chief, and took great pains to enter a caveat against certain kinds of "science." Clifford grows old. At Walker's inauguration, when I was a student-marshal, his remarks were excellent. Charles replied in a dozen emphatic words — (which woefully brought out the length of the previous speech) — and took the old chair midst great applause.[1] Before the remarks of Clifford, had come a Latin Salutatory; very well conceived and delivered by White, Senior. The allusions to President (pro temp.) Peabody were finely received by the students, which shows he managed them well. Then, after a chorus, "Domine fac salvum Præsidem nostrum," the President advanced to a little reading stand and delivered his Address. I had looked for a very good, sound discourse, but this went far beyond all I had expected! It was in style

[1] "*Mr. President*, — I hear in your voice the voice of the Alumni welcoming me to high honors and arduous labors, and charging me to be faithful to the duties of this consecrated office. I take up this weighty charge with a deep sense of insufficiency, but yet with youthful hope and a good courage. High examples will lighten the way. Deep prayers of devoted living and sainted dead will further every right effort, every good intention. The University is strong in the ardour and self-sacrifice of its teachers, in the vigor and wisdom of the Corporation and Overseers, and in the public spirit of the community. Above all, I devote myself to this sacred work in the firm faith that the God of the Fathers will be also with the Children." (J. S. Clarke, *John Fiske*, I, 355.)

clear, elegant, and terse; in matter comprehensive and critical. His views of what a University should be were beyond praise. Such a volley never was fired before in these old walls; and yet there was nothing "radical" about it. They were one and all content with this address — most were even enthusiastic! — I heard only that little, jealous, ordinary Judge —— who said — "Hum! Pretty dogmatic." — A fitting end was a most reverent benediction from Dr. Walker. Afterwards was an evening reception at the President's, where saw Aunt Eliot, Mary, Lizzie, and Kate all looking happy.

From a letter of John Fiske's to his wife

I never before heard a speech so grand and impressive. It lasted an hour and three quarters; and during all you might have heard a pin drop, save when the old arches rang with thunders of applause. We are going to have new times here at Harvard. No more old fogyism, I hope.[1]

From a letter of Mrs. Elliot Cabot's to her husband

I cried and laughed and felt when I reached home a good deal as if I had been to the opera. Emerson was there, right in front, listening and smiling and assenting, Dr. Hedge near by looking friendly and attentive, Theodore [Lyman] and Sam Eliot side by side, Theodore exultant and Sam jolly. Charles's short address on receiving the office from Governor Clifford I would have

[1] J. S. Clarke, *John Fiske*, I, 353.

gone a hundred miles to hear and, as his manner was more than the words, you will not get it from the papers. His voice was full of feeling, but clear and strong, and the intense sincerity and manliness of his whole bearing most impressive.

"Finally," Lyman wrote, "I am happy to have a President who not only has that needed organ a head, but also is gifted with legs, arms, a straight back, and (actually) a head of hair. This last I think you preserve by some chemical dodge of self and Storer."

The task of stating the case between the new and the old education, which had oppressed Eliot when he consulted Brush, was disposed of in his opening words:

"The endless controversies," he began, "whether language, philosophy, mathematics, or science supplies the best mental training, whether general education should be chiefly literary or chiefly scientific, have no practical lesson for us today. This University recognizes no real antagonism between literature and science, and consents to no such narrow alternatives as mathematics or classics, science or metaphysics. We would have them all, and at their best. . . . A university is not closely concerned with the applications of knowledge, until its general education branches into professional.... It were a bitter mockery to suggest that any subject whatever should be taught less than it now is in American colleges. The only conceivable aim of a college government in our day is to

broaden, deepen, and invigorate American teaching in all branches of learning. It will be generations before the best of American institutions of education will get growth enough to bear pruning. The descendants of the Pilgrim Fathers are still very thankful for the parched corn of learning...."

More important than the rivalry between subjects was the problem of employing right methods of instruction. He spoke about lectures as compared with recitations, of standards and of methods of examination, of the dependence of the colleges on the schools, of college discipline; about poor students and "scholarships"; about the higher education of women, and of why Harvard could not admit women on a co-educational basis, although it might hope to devise other ways of making advanced instruction available to them. These were all topics of the hour. He spoke, of course, about what was already called the "elective system."

"The young man of nineteen or twenty ought to know what he likes best and is most fit for. If this previous training has been sufficiently wide, he will know by that time whether he is most apt at language or philosophy or natural science or mathematics. If he feels no loves, he will at least have his hates.... When the revelation of his own peculiar taste and capacity comes to a young man, let him reverently give it welcome, thank God, and take courage. Thereafter he knows his way to happy, enthusiastic work, and, God willing, to usefulness and success. The civilization of a people may be inferred from

the variety of its tools.... For the individual, concentration, and the highest development of his own peculiar faculty, is the only prudence. But for the State, it is variety, not uniformity, of intellectual product, which is needful.

"... A university must be indigenous; it must be rich; but, above all, it must be free. The winnowing breeze of freedom must blow through all its chambers. It takes a hurricane to blow wheat away. An atmosphere of intellectual freedom is the native air of literature and science...."

Naturally Mr. Emerson, "right in front" among the Overseers, smiled and assented, for he seemed to be listening to an apostle of his own gospel that "Nature, when she sends a new mind into the world, fills it beforehand with a desire for that which she wishes it to know and do." [1] John Fiske, and everybody else who wanted to see American colleges freed from denominational and political influences, took it for a good omen when he said squarely that "Philosophical subjects should never be taught with authority." "It is not the function of the teacher to settle philosophical and political controversies for the pupil.... The notion that education consists in the authoritative inculcation of what the teacher deems true may be logical and appropriate in a convent, or a seminary for priests, but it is intolerable in universities and public schools, from primary to professional."

Toward the close Eliot spoke of Harvard's organization

[1] Emerson, *Education*, Centenary ed., x, 136.

and passed the different governing boards — Faculties, Overseers, President, and Fellows — in review, and explained his conception of their several functions. It was a diplomatic thing to do, for it showed that he recognized the constitutional prerogatives and powers of each body, and tended to allay the possible fears of men whose confidence was essential to him. To the Overseers, of whom a considerable minority had opposed his election, he conceded all they could ask. "... The real function of the Board of Overseers is to stimulate and watch the President and Fellows. Without the Overseers, the President and Fellows would be a board of private trustees, self-perpetuated and self-controlled. Provided as it is with two governing boards, the University enjoys that principal safeguard of all American governments — the natural antagonism between two bodies of different constitution, powers, and privileges. While having with the Corporation a common interest of the deepest kind in the welfare of the University and the advancement of learning, the Overseers should always hold toward the Corporation an attitude of suspicious vigilance. They ought always to be pushing and prying...."

Of the Faculty he remarked that "... The University as a place of study and instruction is, at any moment, what the Faculties make it. The professors, lecturers, and tutors of the University are the living sources of learning and enthusiasm. They personally represent the possibilities of instruction.... As a fact, progress comes mainly from the Faculties...." Also, "Two kinds of men make

good teachers — young men and men who never grow old."

Coming to the Corporation, a touch of fervor colored his words. Perhaps some people may have smiled as he closed his word-portrait of that little board of close-mouthed gentlemen, whose inglorious business it was to mingle caution with courage in discharging their trust. "You recognize, gentlemen, the picture which I have drawn in thus delineating the true spirit of the Corporation of this College. I have described the noble quintessence of the New England character — that character which has made us a free and enlightened people; that character which, please God, shall yet do a great work in the world for the lifting up of humanity."

Finally he put himself on record as to his own rôle. "... However important the functions of the President, it must not be forgotten that he is emphatically a constitutional executive. It is his character and his judgment which are of importance, not his opinions. He is the executive officer of deliberative bodies, in which decisions are reached after discussions by a majority vote. Those decisions bind him. He cannot force his own opinions upon anybody. A university is the last place in the world for a dictator. Learning is always republican. It has idols, but not masters."

It is quite just to say, with President W. A. Neilson of Smith, that Eliot's inauguration began a new era in the history of American university education; quite just, too, to say that the Inaugural Address was an amazing docu-

ment.[1] But it may be doubted whether its prophetic quality, which so impresses us now, was then discernible. Eliot's ideas were not novel; everything must depend upon how he should carry them out. We who know how he did that can see that forty years of reform were distinctly though necessarily only slenderly outlined in the Inaugural, and we recognize it as one of the rare self-dedications that stand corroborated by a long career of achievement. But suppose the program had not been realized? For it did not have to be.

The true portent was not in the words of the Inaugural. It was — one could already recognize the justice of his remark — the character of the new President that was of moment. Eliot's hearers listened to his words, but they must have been even more impressed by him. Most of them had never heard him speak even in a classroom. But now he appeared before them, tall, serious, standing on the threshold of his new career, with the calm look of a man whose patience and strength would be inexhaustible, stating plain views about hot questions in a voice whose beauty filled the church to the farthest recesses of the balconies. That mysterious sense of a presence, more certain to command attention than the physical touch of a hand, was already his to convey and communicated itself to the audience with his first simple sentence. It was palpable that the heart of the matter was behind the words, was the man who would turn out to be a doer —

[1] In the Preface to *Charles W. Eliot, the Man and His Beliefs*. The Inaugural Address may be found in the work just mentioned; also in Eliot's volume called *Educational Reform*.

who would be as indeflectable from a purpose as a compass that points the magnetic pole through no matter what obstacles of wood and brass; a man in whose nature there was iron and whose iron was already magnetized. Ideas are, in truth, forces. Infinite, too, is the power of personality. A union of the two always makes history. Eliot himself was the new era.

CHAPTER VIII

1869–1878

First tasks and initial achievements — Administrative reforms — Changes in the College — University lectures — Appointments — More electives and effect on the Faculty — Campaign of the standards in the professional schools — Law School — Divinity School — Medical School — Scientific School — The Annual Reports

When the people poured out of the First Parish Church on the gray October afternoon of the inauguration ceremony and glanced across the street at the College whose future had just been the subject of such hopeful discourse, they saw what looked like the plain buildings of a New England academy disposed at intervals around the sides of a quadrangle. The elm trees among which the buildings stood were bare, the grass was beginning to wither, the meagre fence of granite posts with three rails strung between asserted the legal limits of the grounds quite gracelessly. For the eyes of many who had spent happy years in the College, sentiment clothed the scene with charm, but to an unprejudiced stranger it must have looked thin and bleak. The quadrangle, long called the Yard, and still so called, was incomplete, for Thayer, Matthews, and Weld Halls had not been built. (Thayer was put up in 1869–70, the other two in 1872.) Beyond University Hall the space which has become a second quadrangle since Sever, Emerson, and Robinson Halls were erected, was partly flanked on one side by Appleton

Chapel, and on the other by the Boylston Laboratory and the old Gore Hall Library. It stretched on as far as the back yards of a row of dwelling-houses that stood along Quincy Street. Although most of these were occupied by members of the Faculty, their fronts faced into the street beyond and their rears were all turned upon the College. Among them, at a point where the ground rose to a slight eminence, was a rather absurd-looking red-brick house in which Eliot had taken up his official residence. Built in 1861, in a style which boasted only that it did not quite resemble any other, it was neither commodious nor comfortable. Though it contained what was a fair-sized study, it lacked a good reception-room. The bedrooms, up one flight, were crowded under a close-fitting, slate-covered mansard roof, and in warm weather they became as hot as Tophet. It lacked the comfortable veranda that was added later, and it had no garden of its own. But there it was, the President's House. Eliot was to live in it for forty years, to make the best of it without complaint, and even to persuade himself that its minimal quality was appropriate to the head of an institution that provided no more than the essential least for any of its faithful servants.

The aspect of the town which surrounded the College was still very much like that of the village which President Monroe saw when he came to receive an honorary degree in 1817. Detached houses stood in lawns or small fields. There were no walls, few hedges, and almost no concealments. Scanty fences were maintained to keep out the

cattle that were frequently driven along the main thoroughfares. The streets were in fact rather like shady country roads, and, proceeding away from Boston, they soon led to the farms and woodlands of Belmont and Arlington. The "Square" — Harvard Square — which was really only two short sides of a square, trying to embrace a corner of the College grounds with a confrontation of small "stores," had been called "the village" not more than twenty years before. It had lately become the starting-point for some horse-cars which provided the cheapest known conveyance to Boston.

Among these scenes Eliot's tall young figure now became familiar again. The students saw him walking hither and thither about the College, usually solitary and unrecognizing. In the other parts of Cambridge or the neighboring countryside he frequently appeared riding a large horse. His seat was admirable. He wore long trousers strapped under his insteps in the fashion of the time, or sometimes what were commonly known as "leggins," but what he called "leggings," correctly. At other times he drove himself in a one-horse buggy, handling whip and reins like a man who had learned in a good school, and again sitting very erect. In fact, the remarkable dignity of his figure was never more noticeable than when he was mounted or driving. When he drove his buggy, he often had one or both of the little boys with him. After two or three years they grew big enough to gallop a pony along beside his horse when he went out to ride.

He began without delay to push for the reforms and innovations that he desired. To review them all fully would demand too much of the reader's patience, yet it is worth while to take account of what was done by canvassing the results in a summary fashion, remembering all the while that hardly a measure, no matter how sensible or how trivial it would appear to us to-day, could be carried into effect without explainings, persuadings, and subsidiary arrangements. It would, of course, be gratuitous and also unfair to other men to pretend that all the changes that were brought about in the first years of his administration were conceived by his unprompted imagination. For he did not have to work unaided. But if a force which is suddenly introduced into a static situation, to the disturbance of its equilibrium and with the effect of liberating other forces hitherto latent, may be spoken of as a cause of changes that follow, then it is right to attribute to Eliot almost everything that now occurred. The direction in which all sorts of things began to move was certainly the direction in which he was pressing forward.

The various changes that were made will be considered group-wise, and it will be convenient to take them up under three heads under which most of them can be marshaled.

In the first place, there were a number of administrative innovations. If one wished to dismiss them, one might speak of them as no more than the sensible ordering of routine. But, even when looked at that way, they show

that Harvard — and doubtless other colleges, too, for colleges being human and imitative were much alike — had lacked the guidance of business-like executives for a long time; and to glance at them is the quickest way to understand what a clutter of usages outworn encumbered the ground upon which Eliot had to build.

Then there was a second category of measures whose more interesting implications may readily be seen. They concerned the College primarily. Their aim was to deal with it according to an enlarged conception. Its rôle was to be cultural still; but its sphere was to embrace the new physical and social sciences and the new scholarship. The undergraduate's participation was accordingly to be more active and more responsible.

In the third place, the four professional schools or special departments appeared to Eliot to require bracing up. The practical problems that had to be solved and the procedures which the circumstances dictated differed from school to school, but in all four departments Eliot's purpose was essentially one and the same.

Administrative reforms

The mere naming of some of the administrative changes that were effected within the first two years will suffice to indicate their scope and variety. For example, the question how to lighten the President's burdens, which had been debated by the Overseers before Eliot's election and which had been a good deal talked about for some years, was answered by creating the office of Dean of the

College. Beginning with the first year's second term — that is, in February, 1870 — Ephraim Gurney, the new Dean, assumed all disciplinary duties and some others which, together, had previously consumed nearly three quarters of the President's time. Similarly a dean was appointed in every department of the University that had a faculty of its own. The custom of requiring and printing a report on his department from each along with the Annual Reports of the President and Treasurer was inaugurated.... A confusion of term-times and vacation periods in different departments of the University was ended by the establishment of one University calendar. This was a first step in the direction of greater coherence between the several parts of the University.... The six-weeks winter holiday, which had long prevailed in the College and which used to be defended on the ground that it enabled poor students to earn a little money by teaching country schools, was cut down to a Christmas fortnight. On the other hand, the summer vacation was prolonged through September, so that teachers and students alike might have three summer months for travel or to do a piece of consecutive work.... More land was bought for future expansion. A parcel of real estate on the river was acquired for the site of a boathouse.... Buildings were renovated and remodeled. "The offensive and uncomfortable privies" which had long stood behind University Hall were swept away, along with the scrubby evergreen thicket that surrounded them; water-closets were installed in dormitories. A number of ugly and diseased

trees were removed from the Yard.... Beds were prepared for shrubberies on the outskirts of the Yard. "The College grounds," said Eliot, "ought to be kept in such condition that they shall be an ornament to the city and a source of pleasure to all its citizens, as well as to the students who most frequent them." [1] ... A thorough revision of the University statutes was begun. One of the alterations that was enacted in the first year may be cited as typical of the new administration's policy toward the students. They had previously been treated as schoolboys whom it was not safe to trust, and so they had not been permitted to borrow books from the College Library. The revised statute allowed them to do this. The process of revision went on gradually and continued until, by 1877, a booklet containing nearly forty pages of petty regulations had been replaced by a collection of enactments that could be printed in less than five pages, enactments that were broad and harmonious, and that have facilitated an orderly and flexible management of the University's affairs ever since.

The question whether the President should concern himself equally with all departments of the University, which the Overseers had debated inconclusively during the winter of 1869–70, did not require to be settled by a new enactment, for the existing statutes gave him legal standing as the head of every department, and Eliot had merely to break the tradition which confined the President's activity to the College. He began straightway to

[1] *Annual Report*, 1869–70, 23.

attend and preside over the meetings of all faculties with unfailing regularity. The effects in the direction of unification and organization were immediate and cumulatively helpful. Reviewing his early reforms twenty years later, Eliot observed, "Judging by the results I believe this to have been the most important single change which has been made in the administration of the University." Such meetings became numerous, for he gave faculties and boards and committees more business than they had ever faced before. The records show that between September, 1869, and August of the next year, the Corporation was called to sit thirty-four times — Eliot always presiding; the Overseers met seventeen times — Eliot always attending; the College Faculty held forty-five sessions — the President presiding at all of them; and the smaller faculties of the Divinity School, Lawrence Scientific School, Medical School, Dental School, School of Mining and Geology, and Zoölogical Museum had forty-four meetings at thirty-eight or -nine of which the President appeared and presided. In those days faculty and committee meetings were usually held in the evening, and some of those enumerated lasted until eleven o'clock. Eliot was not only exploring the business of the whole University, but studying its men. He carried one reform after another by encouraging the freest discussion of business that had been put on the docket. And then, after the items on the docket had been fully talked over and disposed of, he might prolong a meeting until eleven o'clock by propounding questions that could serve no apparent

purpose unless he was preparing the strategy of further reforms by exploring the minds of his colleagues. Some of them complained most wearily.

Reforms of larger implication

Other innovations that were more than mere measures of administrative convenience included the following:

Admission requirements and methods of administering examinations were revised, and generally speaking in the direction of higher standards.

Records of scholarship were completely separated from disciplinary records in the newly created Dean's Office. The abolition of petty regulations about student deportment was begun and carried forward. Eliot seems to have doubted their wisdom ever since he was an undergraduate. President Rogers had done without them at the Institute of Technology and had proceeded on the theory that the way to make students orderly and responsible was to trust them and not harass them. Consequently there had been remarkably little of the traditional antagonism between student and teacher at the Institute. Eliot, having participated in its successful experiment, had complete faith in its method when he came back to Harvard as President.

The lessons of Harvard's new disciplinary policy, after it had been applied for a few years, impressed other colleges more than those of a technical school like the Institute could, and in time the new disciplinary policy had a wide influence outside Cambridge.

The practice of awarding a Master of Arts degree to any Bachelor of Arts who managed to "sustain a good moral character" for three years after graduation, and who would pay five dollars for it "in advance," was put a stop to. This cleared the ground upon which the structure of a Graduate School of Arts and Sciences began slowly to arise. What might be called corner-stones of that structure were laid when the governing boards established the degrees of Doctor of Philosophy and Doctor of Science and voted to award them upon the basis of examinations to be administered by the Academic Council. (In 1873 these degrees were awarded for the first time — the Ph.D. to W. E. Byerly in Mathematics, and C. L. B. Whitney in History; the S.D. to John Trowbridge in Physics.)

The system of honors at graduation, which had been inaugurated a few years before, was recast so that a student might win honors in the Classics, Modern Languages, Philosophy, History, Mathematics, Physics and Chemistry or Natural History by distinguishing himself in six or seven courses in the field chosen. This, it will be seen, encouraged a practice essentially like what is now called "majoring" in a particular subject or field of interest.

In 1872–73 the courses given in the College were numbered and arranged in the Catalogue by subjects — the subjects being the seven just named plus Music. That is, a course on Integral Calculus appeared as Mathematics 4 in a group with ten other mathematics courses, instead

of as Junior Mathematical Elective No. 1 among the studies of the Junior year. This little change may be recognized as expressing a conception of the curriculum that later facilitated three developments — namely, a departmental organization according to subject-matter, a true elective system, and an indefinite multiplication of courses both laterally into new departmental groups and vertically into advanced studies for Seniors and post-graduates. The Catalogue of that year was the first one that told the students what professor or instructor would give each course.

What courses to offer was a question which it was peculiarly the province of members of the Faculty to decide, like the question how to conduct them. The one instance in which Eliot made a definite proposal and insisted on its acceptance resulted in an introductory laboratory course in Chemistry. Cooke, who was an unusually vigorous and jealous guardian of the Chemical Laboratory, resisted; but to no avail. That elective for beginners, long named Chemistry I, was taught on a system founded on Eliot and Storer's textbook. What had interested Eliot about his own teaching, perhaps more than anything, was the use of the laboratory for instruction. It is easy to imagine that he would have been intent upon having beginners given the benefit of that method at Harvard. As soon as Trowbridge was appointed to teach Physics, he offered a course of "Practical Exercises in the Laboratory" for beginners that was analogous to Chemistry I.

In the spring of 1873 it was settled that courses given in any part of the University were to be open to students in any other department. Thus, for example, law students might enter the College classes in History or Latin without paying an extra tuition fee. Eliot's comment — "this action... will make the opportunities offered to students in all the departments richer and freer" — expressed his constant purpose.

President Hill had instituted what were called University Lectures with the idea of extending the College horizon at little risk and no expense. As at first devised, they were brief series of discourses delivered by gentlemen who were compensated for the trouble of lecturing by the pleasure of being listened to. In the seven years during which President Hill arranged for University Lectures, there had been seventy-four of these brief courses, and all but seven of them had treated of scientific subjects. They had, in fact, been his device for preserving the integrity of the old curriculum while furnishing a little more science to those who had the zeal to attend them. Eliot thought he saw in them more considerable possibilities. He conceived that if only those persons were admitted to them who were sufficiently interested to pay a fair fee, and if the fees were then turned over to the lecturers by way of compensation, the courses could be put on a solid basis. It seemed possible that they might then be valuable to graduate students, although as Professor Haskins has said, they resembled university extension work more than anything now understood as

graduate instruction.[1] They were to be open to the public, including women. If successfully conducted under the University's auspices, they ought to extend its influence and prestige. They might, too, be considered as a test of the workability of something like the German Privat-docent system, and would pretty certainly show, without involving the University in embarrassing commitments, whether certain untried men had it in them to become instructors. Accordingly, he went to work with the greatest diligence to systematize the University Lectures and to get up well-arranged courses on Philosophy and Modern Literature for "graduates, teachers, and other competent persons," including women.

Two letters to Brush are merely examples of many others that he wrote. Although the last sentences of the second letter touch upon another subject, they are not to be omitted.

To George Brush

June 9, 1869

Dear Brush, — I want some *confidential* information from you as a man of information and discernment. You

[1] *Vide* C. H. Haskins on the Graduate School in Morison, *Development of Harvard University*, 451, 453.

To speak accurately, the University Lectures were first provided in President Felton's time. In 1863, when President Hill took them up, the Corporation authorized the professors of all departments to meet as a body "for the arrangement of such courses of lectures as may be thought expedient for the benefit of the members of the professional schools, graduates of this or other colleges, teachers of the public schools of the Commonwealth, and other persons." This was the origin of the Academic Council and the germ of the Graduate School of Arts and Sciences.

have some philosophers at Yale — Porter, Dwight, and Fisher? Which of these men has the clearest and strongest mind and which is likely to interest and attract graduates most when teaching a philosophical subject of his own choice. Which of them also has an interval of leisure when he could leave Yale for Cambridge for six or seven weeks. I want to get your best man in philosophy for temporary use at Cambridge and I hope you will tell me who your best man is. There's frankness for you.

To the Same

June 24, 1869

Dear Brush, — I acted on your advice and asked Fisher. He declines on the ground that he lectures steadily through the year at Yale. W. D. Whitney, whom I begged to take part in the course in language, at first declined for a like reason, but now has accepted for your spring recess a little stretched. Why should not Fisher do the same? I told Fisher that you had a vague idea of the project. If he speaks to you about the matter, just help him into the undertaking, won't you? The language course is well supplied; but the philosophy course I am not satisfied with. It is not well to have teachers all of one stripe. I think the experiment an interesting one and a scientific one in method. Would it not be a good thing for the best colleges if their professors got a little interchanged and mixed up during a part of the year? Not to lecture in the town-hall; but to teach their best to a few.

Runkle had a story that you had been obliged to cut

down at the Sheffield Sci[entific] Sch[ool]. Tell me what this means, if anything. Does the Treasurer's report of Yale give the salaries of the professors? Or where can I get that little piece of information? I want to do everything I can towards improving the position of a College professor. It is essential to command the services of young men of the best ability. Meat three times a week does not attract such. Sincerely yours

CHARLES W. ELIOT

In the first year the courses were combined into two series — a philosophical series in which Emerson, Bowen, C. S. Peirce, F. H. Hedge, J. Elliott Cabot, G. P. Fisher, and John Fiske lectured, and a similar series on modern literature in which Lowell, Child, Bôcher, Whitney, Cutler, and Howells lectured. The fee for each course was $150 — equal to the tuition fee in the College. Fiske, whom Eliot invited to discourse on Positivism, was then thought by many people to be an atheist and a person whom right-minded folk should in no wise encourage. Only eight years before, he had been threatened with dismissal from college if he was caught talking Comtism to anybody. To him, at least, the invitation proved how vast a revolution had come over Harvard.

One hundred and fifty-five persons attended one or more of the courses of lectures, but on the whole they were what Eliot called lyceum audiences. There were only four "well-trained young men" who followed the whole philosophical series and took the examinations at

the end. Although a lively agitation in behalf of higher education for women was then going on, only one woman followed the philosophical series through, and only six the series on modern literature.

The next year the scheme was revised and a great number of short, disconnected courses were offered. The fees for these ranged down to ten dollars and less per course. But again the results were disappointing. So the University Lectures were given up. In his Report for 1871–72, Eliot drew what conclusions he could from the experiment. "[The University Lectures] have not," he said, "induced Bachelors of Arts of this University to remain in Cambridge for purposes of systematic study, and they have not attracted to the University advanced students from other places.... Advanced students want profound, continuous and systematic teaching. The University Lectures, taken together as a body of teaching, have been discursive, heterogeneous, and disconnected.... The average quality of the audiences discouraged the attempt to give thorough and highly technical instruction."

It was a mistake to expect "the fresh utterances of distinguished scholars who were not professional teachers, and whose only qualification was that they could speak with enthusiasm of their favorite studies" to be comparable in usefulness to teachers who were resident, paid, professional instructors. Anything like a real graduate school had to wait to be developed in a different manner, and ere long it became clear that "the key to the problem was to be found in the increasing number and variety

of elective courses" that were offered in Harvard College.[1]

Experiments with the University Lectures and the new statutes about higher degrees led, in 1872, to the re-creation of the so-called Academic Council. It consisted of all the professors and assistant professors in the several Departments or Schools, and became the logical body in which to discuss questions of University-wide policy. It concerned itself particularly with the problem of making the University's resources useful to advanced students — the problem of facilitating graduate work of which Eliot was constantly mindful. It assumed the function of recommending candidates for the degrees of A.M., S.D., and Ph.D. (It continued to operate under the statute of 1872 until 1890.)

Every step in the direction of a richer curriculum cost money, and there had never been enough wherewithal. Fortunately new money came in at this time — $50,000 of it in June, 1870, as a first installment of the Class Subscription Fund; $30,000 from tuition fees which, according to a vote passed in 1868, were raised from $104 to $150 a year in 1869; and about $10,000 more from the rental of rooms in the new dormitory that was named Thayer Hall.[2] Accordingly, a general increase of salaries was put into effect in the autumn of 1869. It raised the remuneration of professors from three to four thousand a year.... Seven new professorships were created in differ-

[1] C. F. Dunbar, *Harv. Grad. Mag.*, II, 460.

[2] Thayer Hall, the gift of Nathaniel Thayer, then a member of the Corporation, was built in 1869–70.

ent departments of the University and "engagements for the extension of instruction in 1870–71 were also entered into on such a scale that at the end of that year the President reported that every new resource had been used and every prospective increase of income had been discounted." [1] The number of new professorships which had been established by the time Eliot sent in his second annual Report (in the autumn of 1871) was thirteen. A still larger number of instructors had been added to the list of those appointed for limited terms under various titles.

The several appointments are worth a glance because they were more completely Eliot's personal affair than were other changes that have been mentioned. Any particular reorganization or reform was likely to have been the fruit of other men's thought no less than of his, and none became effectual until it had been voted after discussion in the faculties and governing boards. But with appointments the faculties as such had nothing to do. When Eliot consulted individuals privately about an appointment, they were apt not to be the professors who might think themselves most intimately concerned. If, for instance, it was deplorable that old Professor Bowen should be the one and only fountain of instruction in both Philosophy and Economics, it was clear that the selection of other men to serve as correctives and antidotes and ultimately to replace him could not be guided by Bowen himself. In such a case the President necessarily sought

[1] C. F. Dunbar, *Harv. Grad. Mag.*, II, 449, 456.

the counsel of others. When he had made up his mind, the Corporation usually voted the appointment he proposed, and the Overseers usually, though not always, confirmed it without demur.

Looking first at the non-professional appointments that were made during the first five years of the new administration, it appears that Ephraim Gurney (History), George Martin Lane (Latin), James Mills Peirce (Mathematics), Nathaniel S. Shaler (Paleontology), were promoted to permanent professorships.

It was arranged during the first winter that Charles F. Dunbar should become Professor of Political Economy, although he was unable to take up the duties of the position immediately. "His was probably the first professorship established in the United States which was devoted *eo nomine* to the subject." [1] Ferdinand Bôcher, who had once been an instructor in Harvard and had latterly been Eliot's colleague in the Institute of Technology, was extracted from that institution and appointed Professor of Foreign Languages (1870). Four new men were brought to the College as assistant professors; — Henry Adams (1870), A. S. Hill (1872), Charles L. Jackson (1871), John Trowbridge (1870). They were all quite young; Adams, Dunbar, and Hill were untried as college teachers. Adams did not remain long; but the Harvard History Department gratefully acknowledges its descent from his classes. Trowbridge brought laboratory instruction in

[1] See F. W. Taussig in Morison, *Development of Harvard University*, 187. The appointment went through in 1871.

Physics into the College. Among a number of temporary appointees, some of whom were rapidly promoted to permanent chairs, were W. G. Farlow the botanist (an Instructor at first and an Assistant Professor in 1874), John Fiske (Instructor in History, 1869–70), George L. Goodale (Instructor in Botany and then Assistant Professor in 1873), O. W. Holmes, Jr. (Instructor in the Constitution of the United States, 1870–71), William James (Instructor in Physiology, 1872), Charles Eliot Norton ("Lecturer on the History of the Fine Arts as connected with Literature," 1874), John K. Paine (Instructor and then Assistant Professor of Music, 1872), George H. Palmer (an Instructor in Greek, then in Philosophy, made Assistant Professor in 1873). The enumeration is not complete, but will suffice.

Among the appointments to the professional schools, C. C. Langdell's is particularly notable because of its consequences to legal education. Others were Charles Carroll Everett (Professor of Theology in the Divinity School, 1869), Hermann A. Hagen (Professor of Entomology, 1870), Francis H. Storer (Professor of Agricultural Chemistry in the newly organized Bussey Institution, 1871). Five young men, James Barr Ames, Henry P. Bowditch, R. H. Fitz, John C. Gray, James B. Thayer, were added to the faculties of Law and Medicine by one appointment or another before 1873. C. S. Sargent was made Director of the New Arnold Arboretum in 1872.

It is hardly necessary to rehearse here what each of these twenty-eight men — most of them young then —

did later to make the mention of him in this connection significant of Eliot's aims and discernment. The bare list serves to suggest a rejuvenation of the College and a strong reënforcement of the progressive program. Langdell's appointment was Eliot's own inspiration, boldly acted upon. Precedent would have led to the selection of some eminent judge or leader of the Bar to take the chair that Story, Greenleaf, and Theophilus Parsons had filled, and such a selection would have had the immediate advantage of giving an appearance of strength to a school that was being criticized. But an unknown gentleman named Christopher Columbus Langdell was brought from New York. The reader will recall that Eliot had met him twenty years before and had then recognized his quality. The other members of the Corporation consented to his appointment reluctantly and "probably out of some general purpose to support their young President"; the Overseers with even more reluctance, which was overcome by quoting to them James C. Carter's and Joseph H. Choate's high opinions of his learning and legal acumen. Certain other appointments, too, Eliot probably made on his own initiative. Among them may be surmised to have been Bôcher, Hill, Storer, Fiske, Norton, James, and Thayer, for he knew each of them quite well. In Fiske's case he provoked a storm of opposition and must have done so with his eyes open. Henry Adams is supposed to have been Gurney's proposal. Ames's appointment was notable as an innovation, for Ames had never practiced law, and Langdell recommended him for

his legal mind and his success as a young teacher in the College. Dean Pound recently said of this appointment that it was entirely out of line with Anglo-American professional tradition and that it reflected Langdell's foresight, Eliot's wisdom, and the courage of both. If he is right — and I would not imply that I doubt it — then Eliot realized that the experiment might yield a partial solution of the difficult problem of staffing professional schools of a high order — legal, medical, or any other.[1]

How much the teaching staff of the College had been enlarged by the autumn of 1872 appears from the following figures, taken from the President's Report for 1871–72:

Yea.	*Professors*	*Assistant Professors*	*Tutors*	*Instructors*	*Assistants*	*Total*
1866–67.....	13	3	5	2	1	24
1872–73.....	20	8	6	12	5	51

These additions to the teaching staff and the liberal policy that was now pursued in the Faculty and Governing Boards afforded the instructors new and unequaled opportunities to teach what they were interested in instead of almost nothing except what it was thought wise to prescribe to the average undergraduate. The case of Professor F. J. Child presents itself as an example, for a manuscript report which he made to the Board of Overseers the year before Eliot's election happens to have been preserved, and gives us a more accurate basis for compar-

[1] Roscoe Pound on the Law School in Morison, *Development of Harvard University*, 478.

ing what he was doing then with what he did a few years later than is available in other instances. Child had been teaching in the College since 1846, had held the Boylston Professorship since 1851, had begun the publication of his monumental work on the "English and Scottish Popular Ballads" in 1857, and was forty-three years old in 1868. He was always an excellent teacher, and by that time he was known on both sides of the Atlantic as an admirable and original scholar. In short, when Eliot became President, Child was a man to whom advanced students would have been flocking if the conditions had been what they are to-day. In 1867–68 his chief duty as a teacher was to conduct the classes in "composition" that all Sophomores and Juniors were made to attend. So he had to spend hours and hours in correcting their boyish and ill-written exercises. It was an occupation that his spirit loathed. With an unconcealed note of bitterness, his report remarks that in that year (1868), for the first time, he had had "an elective section of the Junior class assigned to him." The men who chose that "elective" studied old English and read part of the "Faerie Queene" under his inspiring guidance, and during the second term they went on with him to Shakespeare. No other course in English Literature was offered to any class that year. In short, until then, and so far as the students of Harvard College were concerned, Child's unusual knowledge and gifts were largely wasted.

But in 1872–73 his labors as a teacher of Rhetoric had been cut down to part of a half course and he offered the

following electives: Anglo-Saxon (three Sophomores enrolled), History and Grammar of the English Language (ten Juniors enrolled), English Composition and English Literature (thirty Seniors enrolled). The next year he substituted for the last of these courses a new elective on Chaucer, Shakespeare, Bacon, Milton, and Dryden in which thirty-three Seniors and twenty-seven Juniors enrolled.

A significant and promising consequence of all things taken together was that Harvard College began straightway to be an institution with which teachers of scholarly taste and ambition could more easily be persuaded to ally themselves.

It is right to look at the early enlargement of the Faculty and curriculum from the teacher's side — as we have just been doing — because the danger of beginning to talk prematurely about its implications for the undergraduate must be avoided. The Eliot epoch at Harvard is, rightly enough to be sure, associated in people's minds with the establishment of the elective system. But that so-called system is now commonly thought of solely with reference to student needs. And, historically speaking, this is wrong. The amount of time given to prescribed studies by Freshmen, Sophomores, and Juniors was reduced very slowly, as the following table shows, and the list of elective courses, though prolonging itself at a rapid rate, was not long enough, for many years, to allow the undergraduate to stray very wildly during the portion of his time that he could dispose of to suit himself.

EXERCISES PER WEEK [1]

Year	Senior		Junior		Sophomore		Freshman	
	Req'd	Elec.	Req'd	Elec.	Req'd	Elec.	Req'd	Elec.
1868–69.....	6	6 or 9	6	6 or 9	6	8	all	none
1870.....	½	12	6	9	5½	8	all	none
1872–74.....	0	12	6	9	8	8	all	none
1876–78 ..	0	12	2	12	4	10	all	none
1879–80.....	0	12	0	14	2	12	all	none
1884.....	0	12	0	12	0	12	7	9

At first Eliot himself did not advocate giving the youngsters who came to Harvard College anything like complete freedom to select their studies. But he did see that the establishment of a large degree of freedom was an essential step toward an ulterior goal. Just what shape the American university that was still to become a reality would assume, he could not see clearly. But he was sure that it must be a fruit of growth, and he knew, in the way that creates an animating conviction, that it could not grow so long as it tried to prescribe most of the work of its students. He intended that Harvard should become a great seat of learning, to which mature scholars should resort as they did to the best Continental universities. As fast as men learned more about the physical world, new sciences must find place there. Harvard must be a university wherein new methods could be applied to the study of history, economics, language, literature, and the moral sciences. Men who would explore the frontiers of knowledge and fashion new tools of scholarly and cultural discipline must work there. It must keep pace with the march of a more and more complicated civilization

[1] From *Annual Report*, 1883–84, 23.

and help to guide it. This aspect of Eliot's policy has not been dwelt upon as much as it deserves to be. The important early results of his management of the curriculum were that a revolution in the work of the Faculty was inaugurated, and that foundations were laid upon which the Graduate School of Arts and Sciences could later be built.

The Professional Schools

In America in 1870 the ministry, law, medicine, and teaching were the only established professions. Nobody had yet thought of devising a special course of instruction for teachers. Engineering in its various branches, and architecture, although barely beginning to count a sufficient body of competent practitioners to claim recognition, were being taught by a number of new "scientific" or "technological" institutions. They were forward-looking and unhampered by tradition; but they could find almost no teachers whom experience had prepared for their special work, almost no textbooks and practically no apparatus. The schools that had long existed to fit young men for the ministry, medicine, and the law, whether at Harvard or elsewhere in America, were contenting themselves with a lower standard of accomplishment than they had aspired to during the first third of the century. In a measure their decline had been a consequence of poor administration. But it was also symptomatic of a general decline of the level of culture in the learned professions; and that, in its turn, was but one

manifestation of tendencies that had been modifying American society widely. After the time of Andrew Jackson and during the opening of the West, the social tone became younger and more crude than it had been while the men who remembered the establishment of the Constitution enjoyed influence and power. The breakdown of the older authoritarian traditions was accompanied by changes in politics and manners as well as in the professions. This phase of American history cannot be discussed in the space that is available here, but it must be mentioned, because it seems correct to say that the fresh and forward movement in professional education was effectively led off by Eliot, and that it had far-reaching implications.[1]

It has been explained that earlier presidents concerned themselves very little with the professional schools. They allowed them to run along in the manner that is sometimes advocated as ideal — each being conducted by a group of teachers who taught as they chose and who managed things without lay interference and in whatever way they thought best. It has also been intimated that Eliot considered himself the President of every department of the University no less than of the College. He pushed the reorganization of the other departments to the fore without waiting for his first winter in office to slip by; and began a series of critical comments that were candid

[1] That being the case, it is worth noting in connection with the history of the larger movement that Eliot was a product of a patrician social nucleus which had been able to resist certain tendencies of the time with exceptional success.

and informing. They were also unprecedented; for American college presidents had previously shown as little disposition to find fault publicly with their own institutions as do bank directors to report adversely upon the amplitude of their reserves.

This phase of Eliot's administration might well be called his Campaign for Professional Standards. It was waged most vigorously during the first four to five years; it continued less strenuously — so far as it was necessary for him to exert himself personally — for a long while thereafter; and it might be said to have closed when the Medical School voted to require an A.B. degree as a qualification for admission in 1900. Eliot put his theory of it into two sentences in his Report for 1870–71: "In undertaking to train young men for the clerical, legal, medical, and scientific professions the University assumed grave responsibilities, which have not always been kept sufficiently in view.... In this country, where preparation for the learned professions, except the clerical, has been notoriously scanty, hasty, and unsystematic, it is especially important that the leading University should set an example of thoroughness." He added, as a bit of diplomacy that deceived nobody, "The Faculties of the several Schools and the Corporation are quite of this mind, as their action during the past few years clearly shows."

In fact, the whole trouble, as Eliot understood it, would have required more brutal words. He thought that the standards of the professional schools were shamefully slack. Their pretensions affected him as tainted with

fraud. It seemed shocking that institutions of learning maintained as public trusts should present young men to the community as doctors, lawyers, ministers, and engineers without being able to speak confidently of their qualifications. "College degrees have fallen into just disrepute in this country," said he, "through the ignorant carelessness with which Legislatures have granted the right to confer degrees to hundreds of institutions which had no just claim to the possession of such a power." [1] So he intended that Harvard should treat the community fairly by supplying it with specialists who were better than shams, and he hoped to promote the country's efficiency by providing the best possible education for its professional men. His good sense, his studies of the training and competence of the technical and professional classes in Europe, and his brief association with Rogers and the Faculty of the Institute of Technology had all combined to convince him that this was something the United States greatly needed. The University must give "all its degrees a serious meaning and a real value."

Everybody saw that the reforms he urged must cause an immediate reduction of the number of students in the Harvard Schools. There was no knowing when the numbers would be made up again. That discerning sense of the public mind which was one of his gifts may have told him the time had come when America would welcome and support a better quality of professional training, but

[1] *Annual Report*, 1871–72.

he had nothing tangible to rely on when his opponents argued that the finances of the Medical and Law Schools could not survive the double strain of a diminution in the number of students and an increase in the cost of instruction. His conviction that there was only one policy to pursue carried him through difficulties and over obstacles. Better to lose fighting for something first-rate than to achieve a vulgar success. "At whatever sacrifice," said he in the autumn of 1871, "the University means to persevere in the good work of raising the standards of its professional schools." — "The University means to," were his words, but everybody understood that he was speaking in the first person singular.

He also believed that a decided improvement of the professional schools would react favorably on the tone of colleges and secondary schools.

All Harvard's professional departments were in about the same condition in one important respect; they could hardly be said to have entrance requirements. It was easier to matriculate in the Schools of Divinity, Law, Medicine, Dentistry, or Science than to get into the College — and to do that was not hard. Generally speaking, a "good character" and a previous acquaintance with high-school studies sufficed for admission to all of them. What was more, the evidence of character was not scrutinized except superficially, and examinations, when they were administered at all, were informal and easy to pass. As a natural consequence the average personal quality of the young men who entered these schools was such that

they were looked down upon by the undergraduates of the College. This made no difference to the medical and dental students, who studied in Boston and had no contact with the College undergraduates, but the unfortunate effect on the morale of the Scientific School, whose students were living among the College boys in Cambridge, had been commented on by Eliot in his "Atlantic Monthly" articles.

Apart from this common characteristic the four Schools differed from each other in a number of respects. It will therefore conduce to clearness to consider them one by one.

The Law School

In October, 1869, the three professors who were then the Law School signed a report which began by saying "the condition of the School at the present time is eminently satisfactory." The Visiting Committee of the Overseers showed what it thought of this self-complacent document by endorsing on the back of it a notation that the situation ought to be "carefully considered by a committee so constituted as fully to represent and command the respect of the Legal Profession as well as to have weight with the Corporation, the Overseers, and the Public." Professor Parsons, a man well on in years who had to reckon with other claims on his time, resigned forthwith.

There was no doubt about the eminence and learning of Parsons and the two other professors who were then the teaching staff; the trouble was different. The School

was conducted upon the model of a lawyer's office. The tuition fee was just what a student in a law office customarily paid — one hundred dollars, namely. In a law office students did not have to buy books; the office furnished the textbooks. And so, when Professor Stearns placed his private library at the disposition of the students, he took and kept their tuition fees.[1] For twenty years the language of the School's Catalogue as to entrance, course of study, and degree had not been altered by a letter. Annually, for ten years, the reports to the President had stated, without change of phrase, that "There have been no new arrangements in relation to the organization of the School or the course of instruction." [2] The institution had stood still.

After eighteen months' attendance a student received a degree as a matter of course.

There would, to be sure, have been a certain justice in applying the criticisms that were to be made upon the Harvard School to American law schools generally; and a certain logic in saying that, since the LL.B. degree did not admit to the Bar, it might as well be treated as an "honorary" certificate, like the degree of Master of Arts. But these amiable representations could not alter the fact that "students were admitted to the School without any

[1] C. C. Langdell, *Harv. Grad. Mag.*, II, 490.

[2] *Centennial History of the Harvard Law School* (Harv. Law School Ass'n, 1918) 22, 25. Cf. chap. I, *passim*. Also Charles Warren, *History of Harvard Law School*, II, and sources there cited. "For a long time," said the *American Law Review*, "the condition of the Harvard Law School has been almost a disgrace to the Commonwealth of Massachusetts." Vol. V (1870–71), 177.

evidence of academic requirements, and were sent from it, with a degree, without any evidence of legal acquirements." [1] The professors, who were also judges or practitioners, delivered lectures — in 1869 at the rate of ten a week in all [2] — and spent two years in going through their list of subjects. It was understood that you went to the Law School to read. The classes were not graded. So the curriculum worked like a merry-go-round, and was said to illustrate the truth that there is neither beginning nor end in the law. When a student enrolled, he got aboard at whatever point was passing at that moment, and sat down between men who had perhaps been reading and attending lectures for a whole year.

On September 27, 1870, at the first recorded Faculty meeting in the history of the School, Eliot occupied the chair. Professors Holmes and Washburn and young Professor Langdell were the others. A dean was to be elected. Eliot knew his own wish, but the office was to be filled by vote of the Faculty and he waited anxiously for a nomination. Holmes and Washburn saw that the new administration was creating a number of new deans and apparently each was hoping that some one else would assume the duties of the unfamiliar office. Washburn proposed to make the newcomer dean. Eliot put the motion; Holmes voted *Aye* with Washburn; Langdell was silent. The momentous choice had been made.[3]

[1] C. C. Langdell, *Harv. Grad. Mag.*, II, 494. [2] *Ibid.*, 490.

[3] C. W. E. on "Langdell and the Law School," in *Harv. Law Rev.*, XXXIII (1920), 518.

The Governing Boards had voted that the degree of Bachelor of Law should be conferred only upon students who, having attended the School for two years (instead of eighteen months), had passed satisfactory examinations. One of the first acts of the Faculty under Dean Langdell's and Eliot's leadership was to establish a progressive curriculum by dividing the subjects into first- and second-year courses, and requiring students to pass the first-year examinations before going on to the second-year subjects. In the beginning of 1870–71, Langdell also inaugurated a change in the method of study in his own classes on Contracts and Sales. It consisted, as he expressed it, in using a selection of cases as a textbook instead of a treatise. This gradually extended to all the instruction given in the School, and thus became the famous "case system" which, not only in legal education but outside that special field, has been one of the chief revitalizing influences of the last half-century. Langdell regarded the law as a science, which was to be mastered only by the investigation of its sources — the decisions of the courts — and which could be taught best by men who studied it as a science. The teaching of the law was then quite unknown as a career in England and the United States. Langdell gave up private practice entirely. His appointment and that of J. B. Ames in 1873 (Ames had never practiced) may be said to have marked the beginning of a new order. Many men following their example have since then adopted the teaching of law instead of its practice as a career.

The Law Faculty was so small, and was so soon completely remade, that the most fortunate harmony prevailed in its councils. The President sympathized cordially with the Dean's views just as Langdell believed heartily in the soundness of Eliot's main determination. After 1870 Eliot played his part in the development of the School mainly by giving his full and cordial support to the policies of the Dean.

Good effects of the new régime showed themselves remarkably soon and clearly. A temporary decline in the number of students rectified itself within three years. The average quality of the student body, as determined by such tests as the proportion who had already been through college, improved noticeably; the School's finances began to look up; the atmosphere of the place became keener and more bracing.

The Divinity School

In the Divinity School the problem was essentially similar. A passage in the President's Report for 1869–70 describes it and is, incidentally, a fair example of the way in which Eliot discussed such matters without mincing words.

"Our forefathers thought that the minister should be the best educated man in the community. The announcement in the catalogues of fifty years ago is, that graduates of colleges will be received as students of theology. Gradually other persons were admitted on passing examinations of a comprehensive character. Then these ex-

aminations grew weaker and weaker, until in 1869 it was distinctly announced that a knowledge of the Latin and Greek languages would not at present be insisted on as a requisite for admission to the Divinity School.

"There is reason to hope that in that year the School touched bottom, and that thenceforth it will steadily rise as regards the preliminary education of its students. The year 1870–71 was an improvement upon 1869–70, and in the current year, of thirty theological students, eleven are Bachelors of Arts. In the spring of 1870 the Faculty of the Divinity School returned to the requisition of Latin and Greek for admission, and established periodical examinations in writing to test the fidelity and proficiency of the students. They also recommended one person for the newly established degree of Bachelor of Divinity, after thoroughly examining him. These measures all tended one way and had an excellent effect. In 1870–71 the periodical examinations were continued with good results, the instruction of the School was somewhat enlarged, particularly in German and Elocution, and the Faculty advised the Corporation to make the attainment of the degree of Bachelor of Divinity by examination the only mode of graduation. Heretofore persons who remained in the School three years, and pursued the prescribed course of study with regularity, were held to have graduated, and their names were placed in the Triennial Catalogue as Alumni of the Divinity School, although they had taken no degree. The Corporation have not yet acted on this important recommendation made by

the Faculty; but it is obvious that the proposed measure, rigidly executed, would do a good deal towards invigorating the tone of the School. The sooner, however, the School gets back to the ways of the fathers, in regard to insisting on such a preliminary training as the Bachelor's degree implies, the better for the University and the profession. It is much more difficult to dispense with a previous academic training for theological students than for medical or law students. The student of theology needs at the threshold of his subject a good knowledge of Latin, Greek, German, philosophy and history. It is utterly impossible so to conduct theological instruction that it shall be fairly serviceable at once to students who have enjoyed a good preliminary training and to students who have had little or no previous education. The pulpits of the country are not going to be filled by geniuses; if they were, there would be small need of theological schools. They are to be filled by common men of good natural parts, who have been carefully trained for their special work. These men should be scholars by temperament, education, and inveterate habit, else their congregations will drain them dry in a year or two. Moreover, ministers, having none of the material or adventitious means of gaining influence and commanding respect in the community, need, both as individuals and as a class, all the support and moral strength which the possession of ample learning can give. To breed such men of solid learning is the main function of a theological school connected with a University. If the Divinity School has ever seemed to accept a lower func-

tion, it was quite as much the fault of the community and of the clerical profession as of the authorities of the University. The community has sometimes seemed to think that they could dispense with learning in ministers. The Theological Faculty were vehemently urged by successful clergymen to lower the standard of their School. Fortunately, however, it does not take long to exhibit the consequences of such a policy. The School took a fresh start in 1869, and will speedily resume its proper position at the head of the professional Schools of the University as regards ampleness and thoroughness of work."

The Corporation and Overseers soon approved the recommendations of the Divinity Faculty and voted, the standards having been stiffened, to confer degrees upon the students who graduated in due course.

The Medical and Dental Schools

Langdell, in the Law School, was unique. For in none of the other Schools was the University so fortunate as to find a similar leader. In the Medical School's much larger faculty differences and discussions were serious, and the weight of tradition and personal prestige were at first heavily on the side of opposition to change. Not being endowed, the Medical School lived on the fees of its students. When the necessary current expenses had been paid, its teachers divided up the balance of what was left over and found themselves not too well rewarded for their pains. Various reasonable-sounding requirements about the qualifications of students existed on paper, but were

not effectively enforced. The classes were not graded any more than they were in the Law School; so first- and second-term students listened to the same lectures and the lecturers pitched their instruction to suit the least learned hearers. A student had to attend lectures for "two terms." This implied being on hand for sixteen weeks between November and February during two winters; but one term might be spent at some other school and the spring and summer course if taken elsewhere might be made to count as one term. Thus, by going part way through another school the road to a degree could be traversed in less than a twelvemonth. In addition to the courses of lectures at the winter term the Faculty provided three short sessions between April and November at which there were recitations and a few didactic and clinical lectures in connection with visits to hospitals. Of the three hundred men more or less who enrolled for the winter terms, only a minority attended these summer sessions. It was tacitly admitted that not much instruction in the clinical branches of medicine was to be obtained at the School, for there was a requirement that each candidate for a degree must produce a certificate to show that he had "studied" for three years with some regular practitioner. There were all sorts of practitioners, however, and no way to tell the value of a certificate. Too often it signified nothing. In mid-winter or June, any young man who had attended two terms and judged himself ripe presented a dissertation, paid a fee of thirty dollars for an examination, and was passed upon by the men

whose lectures he had been following. Of the three requirements the fee was the only one with which the student could effect no kind of compromise. The best of the dissertations seemed to a young man of twenty-five to be wretched. There is a letter of William James's which describes the graduating exercises of the Class of '67 with Louis Agassiz on the platform. "His look of mingled wonder, pain, and disgust at the flimsy badness of the dissertations," says the letter, "was amusing to observe." The examination was formal but not formidable; in fact, rather like the mad tea-party in "Alice in Wonderland." In a large room a number of professors sufficient to examine in the nine principal subjects disposed themselves at suitable intervals. The students circulated singly from one to the next and were quizzed on a new subject at each station of the journey. Every ten minutes a presiding functionary sounded a bell and the candidates moved along. When the bell had pealed nine times — that is, after a batch of candidates had spent an hour and a half in going round the circle — the examiners were expected to be ready to vote. This they did without consultation. In fact, the manner of voting was ingeniously devised so that the adverse opinion of one examiner should not influence others. Each had a piece of cardboard that was white on one side and marked with a black spot on the other. The Dean called the name of a candidate and pronounced a formal question and a command — "Are you ready to vote? — Vote!" The nine examiners simultaneously thrust forward their cards. If the Dean counted not more

than four black spots, the candidate received his degree. If five cards showed black spots, the candidate had failed. Thus the recipient of a degree might be quite ignorant of four of the nine branches of medicine that it was truly essential for him to know about. Furthermore, each of the examiners was likely to be lenient in his own subject and to cast a good-natured vote. "Men were loath," says Dr. Harrington, "to acquire the reputation of conducting a strict school" to the detriment of its popularity.[1] "If you know *that*, you know everything," said Dr. Holmes to a student who had given the correct answer to his first question; "now tell me all about your family and the news at home." [2] When the candidate had thus captured his degree, he could hang out his sign and work his ignorant will on the patients who came to him, for under the laws as they then were a School diploma conferred the right to practice.

At first glance it is hard to believe that such had become the usual preparation for a profession which, as Eliot caustically remarked, "was once called learned"; and incredible that many estimable people should have been ready to fight every measure of reform that was proposed. But we shall miss the interest of the story if we judge by our own standards. The Harvard School was no worse than other medical schools in the United States.[3] In fact

[1] T. F. Harrington, *The Harvard Medical School*, 997.

[2] A story which William James used to tell about his own ten-minute quiz by Dr. Holmes.

[3] The Chicago Medical School is entitled to the credit of having initiated a three-year graded course in 1859. In 1869 its example had no imitators. (A.

it was better than most in 1869, for there were very few if any at all at which a student could follow the lectures and demonstrations of so many eminent and able practitioners. The American medical schools like the American law schools descended from the more ancient and not yet discarded student-apprenticeships to which the English-speaking world on both sides of the Atlantic was accustomed. The apprentice system, either pure or in the modified form in which the schools applied it, had produced the whole body of the profession, and the profession was naturally loyal to its parent. The product of the system was not all bad, for when a well-prepared aspirant who was intelligent and industrious came under teachers who were experienced practitioners and generous of their knowledge, a good fruit might still ripen on the aged tree.[1] In the absence of something better, it was not to be expected that many people would perceive that nothing substantial was left of the personal apprenticeships on the one hand, while nothing worthy of the dawning era of modern medicine was being offered by the schools on the other.

It may be noted parenthetically, to escape the need of

Flexner, *Medical Education in the United States and Canada*, Carnegie Foundation, Bull. No. 4; 1910.)

[1] Cf. A. Flexner, *Medical Education in U.S. and Canada* (Carnegie Foundation, Bull. No. 4; 1910), chap. 1, *passim*. On pages 9–10 Dr. W. H. Welch is quoted to the effect that the results were better than the system. Dr. Welch acknowledges his debt, as have many others. But he, like most other leaders in his generation, studied abroad as well as in American schools, and he has frequently led the vanguard of the movement that has completely discarded the old order and put vigor into the modern medical schools.

recurrent explanations, that the Harvard Dental School was in a plight similar to that of the Medical School, except that it was smaller and more pinched by poverty. As the reorganization of the Medical School advanced step by step, its Dental satellite — continuing for many years to have a Dean and Faculty of its own — moved forward by similar advances. It seems unnecessary to do more than remark on the parallelism once and for all, and to add that its little Faculty were more harmonious in their internal councils and quite as eager to adopt any reforms that promised to give their School a better professional standing and a larger measure of support from the University's Governing Boards. To rehearse its history in detail would add nothing significant about Eliot to what is implicit in the story of the Medical School, and would lead to much repetition.

The two men who had most weight in the Harvard Medical Faculty, and who enjoyed great professional and popular prestige as well, were Dr. Henry J. Bigelow and "The Autocrat of the Breakfast Table," who had been the Professor of Anatomy since 1847. It never occurred to any one to accuse Bigelow and Holmes of being sleepy-minded. But both regarded the practice of medicine as an art. They knew the art and believed that it was all that a practical school could afford to concern itself with. Dr. Holmes wrote a paper about the folly of pursuing science while studying medicine.[1] Said Bigelow: "In an age of

[1] *See* "Scholastic and Bedside Teaching" (1867), in *Complete Works* of O. W. Holmes, vol. IX.

science, like the present, there is more danger that the average medical student will be drawn from what is practical, useful, and even essential, by the well-meant enthusiasm of the votaries of less applicable sciences, than that he will suffer from want of knowledge of these... the excellence of the practitioner depends far more upon good judgment than upon great learning.... We justly honor the patient and learned worker in the remote and exact sciences, but should not for that reason encourage the medical student to while away his time in the labyrinths of Chemistry and Physiology, when he ought to be learning the difference between hernia and hydrocele." [1] Bigelow thought of himself as defending a practical system against the assaults of theorists and visionaries. From the premise that "no successful medical school has thought proper to risk large existing classes and large receipts in attempting a more thorough education," he reasoned to the conclusion that the Harvard School should not raise its requirements; and he could not believe that he was making a plea for mediocrity, because he thought of a medical school as a recruiting ground rather than as a training place. He maintained "that physicians are born, not trained, and that the same applied more strongly to surgeons; that if you reduced the number of students, you diminished the possibility of gaining the real physician or surgeon." [2] "The aim of

[1] "Medical Education in America." Address before the Mass. Med. Soc. (University Press, Cambridge, 1871.) Also quoted by Harrington, *History of Harv. Med. Sch.*, III, 1029, 1030, 1035.

[2] Harrington, *op. cit.*, 1022.

any reform in medical education should be to educate at least an equal number of students to a higher standard; and the standard in this country may be raised in the future, as in the past, gradually and with certainty, by making the best opportunities available to the largest number." [1] Had any one told him that this seemed like saying "numbers yield salvation; training hardly counts," he would have replied that he was afraid of seeing men who were born to be physicians frightened away at the threshold; that the path of the practitioner was uninviting anyhow; that, as Dr. Holmes had said, "Medical visits in the country were worth only twenty-five cents apiece and the ambitious student could not afford to make an expensive outlay for his future work." [2] It was all very well to talk about improving the Harvard School; but raising its standards would very likely be fatal to it. The fees of all its students did not suffice to reward the professors adequately or to pay for new equipment. If you scared away a third or a half of them, you might soon be forced to close the doors to all.

Eliot found younger men in the Medical Faculty who had been chafing under Bigelow's domination and were eager for reform. Notable among them were James C. White, David W. Cheever, and Calvin Ellis (who had been made Dean the year before because Dr. Bigelow thought him just the man to keep the records and attend to administrative details). He did not need to have them

[1] "Medical Education in America," cited above, at page 18.

[2] Quoted by Harrington, *op. cit.*, 1001.

point out to him that every ambitious young medical man wanted to get to France or Germany, nor require to be persuaded that the preparation which the American schools afforded was wretchedly inferior. He had looked into the German and French schools, had quizzed a long succession of doctors who had been called to the bedsides of his wife and children both in this country and abroad, and was already convinced. His basic assertion in the first of his Reports was that "the whole system of medical education in this country needs thorough reformation." [1] That sentence has justly been recognized as dating the beginning of a new era in medical education in America. Clearly, he knew himself to be attacking the system as a whole when he began his contest with the conservative element in the Harvard School.

The first step was to lodge some degree of control of the Medical and Dental Schools in the hands of the Corporation and Overseers — to turn them into University Departments instead of private schools. Eliot urged that their receipts and disbursements should pass through the University Treasury instead of being handled by the Faculties; that the students should be graded as they were going to be in the Law School; that the course in the Medical School should be a progressive one and should run through three years; and that the system of examinations should be reformed. He published his opinion that the Medical and Dental Schools "were the worst equipped departments of the University." [2]

[1] *Ann. Rep.*, 1869–70, 18. [2] *Ibid.*

It was not difficult for him to persuade the Corporation to adopt his views in principle, although the "six elderly gentlemen" who were his associates in that body felt somewhat nervous at the speed with which he hurried them along. To win over the Medical Faculty itself was another matter. Meetings were long-drawn-out and became more and more frequent. On March 19, 1870, Dr. J. C. White wrote Eliot, evidently in answer to an analysis of the opposing personalities, and warned him that he underestimated the staying qualities of certain gentlemen, notably Bigelow and Holmes. He ended, "That you are where and what you are, I regard as the one hopeful element in the contest." Bigelow and Holmes together would have been very hard to overcome; but one evening at about this time Dr. Holmes surprised everybody by voting against Dr. Bigelow. After the meeting had adjourned, he came up to Eliot, pressed the ball of his thumb down hard upon a table by which the two men found themselves standing, and said: "You have undoubtedly seen what is the matter with me. I have been sitting under Dr. Bigelow's thumb so long that I've not been able to get out from under." From that moment he not only voted steadily for the program of reform, but evidently enjoyed watching the contest.[1] His account of

[1] Eliot on O. W. Holmes, in *Harv. Grad. Mag.*, XXXI, 457, 460, 461–62; and my own recollection of hearing C. W. E. describe the incident. It is not to be supposed that Holmes was lacking in backbone. Witness the following sentences, ending with Eliot's characteristic confession of the beginning of his own admiration for the Professor of Anatomy: "What an important discovery was Dr. Holmes's demonstration of the contagiousness of puerperal fever, and of its being carried by the physician from one woman to another, or to

Eliot in a letter to Motley shows that by April, 1870, he no longer felt himself pressed down by Bigelow's thumb. Though often quoted, it must be repeated here. The doctor whose name is omitted from the second and third paragraphs was Bigelow.

"Another sensation in a somewhat different sphere is our new Harvard College President. King Log has made room for King Stork. Mr. Eliot makes the Corporation meet *twice* a month instead of once. He comes to the meeting of every Faculty, ours among the rest, and keeps us up to eleven and twelve o'clock at night discussing new arrangements. He shows an extraordinary knowledge of all that relates to every department of the University, and presides with an *aplomb*, a quiet, imperturbable, serious good-humor, that it is impossible not to admire. We are, some of us, disposed to think that he is a little too much in a hurry with some of his innovations,

several others in the same day. We can hardly imagine what courage it took for Dr. Holmes to publish that discovery. In the first place, he was not himself a practitioner, and never had been. What could he know about the proper treatment of puerperal fever, and how could he know that it was carried from one woman to another by the physician? Dr. Holmes's campaign on that subject was carried on with great boldness. He reported publicly, but in proper places of course, that such and such physicians, naming them, had carried puerperal fever from one patient to another, with dates given, and the number of patients that the said doctors had lost. It happened that several of the physicians he named lived in Philadelphia. A shout of derision and wrath went up from medical practitioners all about the country. What was this ignorant person who had never practiced medicine saying to the detriment of eminent practitioners and the medical profession? How foolish the charge, preposterous indeed! My high respect for Dr. Holmes as a man capable of exact observing and recording and then of putting together a coherent and convincing argument, dates from my reading of that fight in which Dr. Holmes so gallantly engaged."

and take care to let the Corporation know it. I saw three of them the other day and found that they were on their guard, as they all quoted that valuable precept, *festina lente*, as applicable in the premises. I cannot help being amused at some of the scenes we have in our Medical Faculty, — this cool, grave young man proposing in the calmest way to turn everything topsy-turvy, taking the reins into his hands and driving as if he were the first man that ever sat on the box. I say amused, because I do not really care much about most of the changes he proposes, and I look on a little as I would at a rather serious comedy.

"'How is it? I should like to ask,' said one of our number the other evening, 'that this Faculty has gone on for eighty years, managing its own affairs and doing it well, — for the Medical School is the most flourishing department connected with the college, [*sic*] — how is it that we have been going on so well in the same orderly path for eighty years, and now within *three or four months* it is proposed to change all our modes of carrying on the school — it seems very extraordinary, and I should like to know how it happens.'

"'I can answer Dr. ——'s question very easily,' said the bland, grave young man: 'there is a new President.'

"The tranquil assurance of this answer had an effect such as I hardly ever knew produced by the most eloquent sentences I ever heard uttered. Eliot has a deep, almost melancholy sounding voice — with a little of that character that people's voices have when there is somebody ly-

ing dead in the house, but a placid smile on his face that looks as if it might mean a deal of determination, perhaps of obstinacy. I have great hopes from his energy and devotion to his business, which he studies as I suppose no President ever did before; but I think the Corporation and Overseers will have to hold him in a little, or he will want to do too many things at once." [1]

Still the contest continued. There had been nine Medical School meetings of which records were kept during the first winter of Eliot's Presidency. The next winter there were twenty-two. Tempers were tried. Even Eliot's patience, which was to become proverbial, appears, from the following, to have given way.

March 15, 1871

My dear Sir, — It will give me pleasure to lay your amendments before the Faculty tomorrow evening. The plan of the Committee amended as you propose would certainly constitute a substantial improvement, a fact which I hope I duly recognized at the last meeting of the Faculty. I owe you an apology for the impatience which I manifested after the vote on your principal amendment. The truth is that I find the organization of the Medical Faculty under the existing statutes a very trying fact. Eighteen teachers work actively in the School besides the Lecturers annually appointed, and yet a majority in a body of no more than eight men (all of whom are seldom

[1] Letter to J. L. Motley, Apr. 3, 1870. John T. Morse, Jr., *Life and Letters of Oliver Wendell Holmes* (Boston, 1896), II, 187–88.

present — only three of whom have representatives in their absence) can determine the policy of the School. At the last meeting, as you doubtless observed, the vote of four professors fixed, so far as that meeting was concerned, a very important rule about length of residence. The more I see of the workings of the present organization, the worse I think of it. There is more bad blood in the Medical Faculty than in all the rest of the University put together — and it has always been so. Do we not hear at every meeting the lowest motives attributed both to teachers and students? You must have been quite as much disgusted as I have been by the mercenary, cynical and selfish thoughts which have so often been expressed at our meetings. I cannot help thinking that there are grave defects in the very constitution of the School. No School can have high success unless there prevail among its teachers harmony, enthusiasm, disinterestedness and freedom.[1]

Bigelow returned blow for blow. "The Corporation?" he cried on one occasion. "Does the Corporation hold opinions on Medical Education? Who are the Corporation? Does Mr. Lowell know anything about Medical Education? Or the Rev. Dr. Putnam? Or Judge Bigelow? Why, Mr. Crowninshield carries a horse chestnut in his pocket to keep off rheumatism! Is the new medical education to be best directed by a man who carries horse

[1] This exists in the form of a draft in Eliot's hand in the College file of his correspondence. To which member of the Faculty it was sent does not appear. I believe that a fair copy of it was mailed in substantially this form and probably to Dr. Bigelow. Eliot did not keep many papers at this time, and would hardly have preserved this draft except as a record of a letter actually mailed.

chestnuts in his pocket to cure rheumatism?" And again — when it was proposed to adjust salaries according to the number of lectures a man delivered — it struck him that the Corporation was proposing "to pay a professor according to the time it takes him to tell what he knows." Some of Bigelow's objections doubtless had a good effect; in the end salaries were arranged in a better way.[1]

When the Medical Faculty and the Corporation had been brought to a vote, there still remained the Board of Overseers as an arena for a last contest. The Overseers were seldom of one mind. When the proposal to require a candidate for a degree to pass in all subjects, instead of in five out of nine, came before it, the measure seemed, for a while, to be in danger of defeat. Bigelow had been using all his social and professional influence, and one doctor, who was a member of the Board, was his staunch ally. At last old Mr. Charles Francis Adams, the ex-Minister to England, who had been presiding without taking part in the discussion, called some one else to the chair

[1] *Henry Jacob Bigelow, A Memoir.* (Boston, Little Brown & Co., 1900), 132, 133. The Memoir omits the names in the first quotation. Dr. F. C. Shattuck supplies them in this chapter on "The Medical School" in Morison's *Development of Harvard University.* Eliot called Bigelow "a natural leader of men by force of activity, ingenuity, and originality." When Bigelow retired in 1880, Eliot paid him a handsome tribute in the course of which he said, "During the discussions of 1870–71 in the Medical Faculty and the governing boards — discussions which resulted in important changes of the general plan and policy of the School — his part was that of a strenuous, uncompromising, and indefatigable opponent of the new projects; but the caution and moderation which his opposition induced the majority of the Medical Faculty to practise, doubtless made the measures which they finally recommended to the governing boards all the wiser, and therefore the surer to succeed." (*Ann. Rep.*, 1881–82, 5.)

and rose to address the meeting. Eliot said afterwards that he had no idea which side Adams was going to support. He began by describing a young graduate of the Harvard School who had lately settled in Quincy, and whose ministrations had culminated in three sudden deaths in rapid succession. An investigation had soon shown why. He had been prescribing overdoses of morphine, not intentionally but ignorantly. The young M.D. had obtained his degree by passing in a majority of the subjects in which he had been examined. Mr. Adams thought it was high time to reform the School. With respect to the motion then pending, his speech carried the day.

It took two years to effect the major reforms; but in the autumn of 1871 the following sentence appeared in italics in the Catalogue: "*The attention of all interested in medical education is called to the fact that the plan of study has been radically changed.*" One cannot help suspecting that triumphant sentence of having been written into the proof-sheets of the Faculty's announcement by Eliot's hand. A full three years' course of study, "so arranged as to carry the student progressively and systematically from one subject to another in a just and natural order," had been organized. Students who entered that autumn and thereafter had to pass an examination at the end of each year in order to be promoted to the studies of the next year, and had to pass in *all* subjects before they could get their degrees. The tuition fees were raised in order to compensate for the expected falling-off in numbers. The

Faculty had been reconstituted to conform with the pattern of the other University Faculties. The School's finances had been transferred to the care of the Corporation and the University Treasurer. The teachers were thenceforth to receive regular salaries.

The question is, said Dr. Holmes, Will the community support such a school? "If a school so remodelled can within a reasonable period become self-supporting... it will soon find all the leading medical schools of the country following its example." Eliot put one of his first strong pleas for endowment into the Report for 1871–72: "It would be difficult to overstate the importance of the effort which this single School is making, with no support except the approval of the profession, to improve the system of medical instruction in the United States. The ignorance and general incompetency of the average graduate of American Medical Schools, at the time when he receives the degree which turns him loose upon the community, is something horrible to contemplate, considering the nature of a physician's functions and responsibilities.... The effect upon the community of allowing the great mass of young physicians to learn the rudiments of their art by practising it, can only be compared to the effect upon an army in the field of officering it with men who have to learn the elements of the art of war by practice in the face of the enemy. This comparison does not exaggerate the evils of the prevailing system of medical instruction in this country. The Harvard Medical School has successfully begun a revolution in this system. A

liberal endowment of the School would insure the complete success of the undertaking, and would encourage other schools to imitate the good example. There is no department of the University upon which money can be more worthily or more usefully bestowed; none in which endowment funds would have more immediate or more lasting effects to advance learning, and to relieve the sufferings, and promote the happiness of mankind." [1] The next year he said: The Medical School "still has the honor of standing alone in its effort to improve the system of medical education in the United States.... It is a noticeable fact that out of 175 students in 1873–74, 62 are Bachelors or Masters of Arts or Science; while in 1870–71 out of 301 students, only 58 were Bachelors." In the year 1874–75 the last of the students who had been enrolled under the old regulations had been passed out of the School's doors. The period of transition was over. There were one hundred and ninety-two students studying for three years instead of three hundred and one for about eighteen months each. There were more instructors and better laboratory equipment. The School ended the year with a $3500 surplus. In that year a course for graduates was established.

The only way to drive people out of a school permanently, said Eliot, is to let it be a poor school.

In 1869 the professional schools were as far as possible from being what are now called graduate departments.

[1] *Ann. Rep.*, 1871–72, 25–26.

Six years later a policy was adopted which set the Medical and Law Schools on the road to becoming true graduate schools. At that significant point this review of their transformation may rightly pause, and Eliot's own comments shall close the chapter so far as they are concerned.

"[An] important event in the history of the Law School, and it may be hoped in the history of legal education in the United States, was the establishment [during the year 1874–75] of an admission examination applicable, from and after the beginning of the Academic year 1877–78, to all candidates for the degree of the School who are not already Bachelors of Arts, Science, or Philosophy. Similar action was taken almost simultaneously by the Medical Faculty, although the particular requisitions were not identical with those determined upon by the Law Faculty. Indeed, the precise nature of the new requisitions for admission to these professional schools is not material; for the requisitions now made will probably undergo a gradual and progressive change. The important fact is, that the University proposes to demand of all candidates for its degree of Bachelor of Laws, or Doctor of Medicine, evidence of some academic training, not so much for the sake of the knowledge which that training imparts, as of the mental power which it develops. The University in taking this action is only doing its duty to the learned professions of Law and Medicine, which have been for fifty years in process of degradation through the barbarous practice of admitting to them persons wholly destitute of academic culture. The professional departments of the

University are by this action only beginning to lend a due support to the College and the preparatory schools, a support which they should always have given, and which in every other civilized country is given to academic institutions by the regulations and usages which govern admission to the learned professions. The schools of Law and Medicine which have sprung up all over the country during the last forty years have held no examinations for admission, and have required of candidates for admission no particular course of previous study. Had they demanded a reasonable amount of academic training, most of them could have procured it from a large proportion, at least, of their pupils. It is not the young men of the country, or their parents, who are responsible for the present degraded state of professional education, but the Faculties and Governors of the modern American professional schools, who having but feeble faith in the value of academic training, or being afraid of diminishing the number of their pupils, failed to demand of candidates for admission an adequate general education. Thousands of ignorant, undisciplined men have consequently entered the legal and medical professions with the scantiest technical preparation, to their own lasting injury and that of the community, who would have found means to get some academic training, had any been required of them. In the mean time the High Schools, Academies, and Colleges of this country have been deprived of the legitimate support which in every other civilized country they derive from the fact that only through them can the learned profes-

sions be reached. As one consequence, the number of young men who resort to Colleges has diminished relatively to population during the past forty years, instead of rising as it should have done with the increase of general well-being. So long as lectures were the one means of teaching in the Law and Medical Schools of this University, the heterogeneous character of the class did not much affect the efficiency of the instruction, except so far as the lecturers felt obliged to adapt their teaching to the ignorant and untrained portion of their audience. But with the adoption of catechetical methods in both Schools, the presence in the recitation rooms of a considerable proportion of persons whose minds were rude and unformed became at once a serious impediment. The large use of examinations in writing also brought into plain sight the shocking illiteracy of a part of the students, and made the Faculties quite ashamed of some of their pupils." [1]

The Lawrence Scientific School

The Lawrence Scientific School had changed less since Eliot left its Faculty in 1863 than had the conditions which surrounded it. Although nominally a distinct unit, it was rightly to be regarded as the largest element in a departmental group to which the School of Mining and Practical Geology also belonged and to which the Museum of Comparative Zoölogy, the Botanic Garden, and the Astronomical Observatory each contributed something. When Eliot now considered these departments as parts of

[1] *Ann. Rep.*, 1874–75, 23–25.

the University's total problem of efficiency and economy, two points emerged.

In the first place, they were discharging two distinct functions. They were teaching fundamental science — which may be done independently of the teaching of technology — and they were trying to train boys to make applications of science to the industries and arts. The work of teaching the elements of science would not have to be done in special schools any longer than the College, clinging narrowly to its classical traditions, refused to undertake it cordially. Cooke, by the force of his own personality, had forced Chemistry into the College on an equal footing with other studies called liberal. Eliot intended that Physics and Natural History should be taught in the College in a similar way.

In the second place, when he could succeed in having the College teach general science, the necessary and separate function of the Scientific School and Mining School would be merely to train engineers. Then the Harvard Schools would be confronted by the rivalry of the Massachusetts Institute of Technology, which had lately begun to do that very work and was doing it very well. So Eliot began, almost as soon as he was elected, to negotiate for a partial merger of the Scientific School and the "Tech." During a few months he believed that he might accomplish the combination. Then he was compelled to admit to himself that it was not going to be feasible for a good while at least.

Accordingly, in 1871–72 the Harvard Schools of Ap-

plied Science were reorganized without more delay and very much in accordance with the memorandum which Eliot had drawn up in 1861.[1] A four-year course was arranged to lead up to the degree of Civil Engineer. Three years' courses were planned to lead to the degree of Bachelor of Science in Chemistry, or in Natural History, or in Mathematics, Physics, and Astronomy. The School of Mining agreed to require its students to take the first three years of the course for civil engineers and then to give them a fourth year of special work as preparation for the degree of Mining Engineer. The instruction in these several courses was planned to lay a broad common foundation and then proceed toward specialization in a systematic manner. In the next place, a special one-year course was devised to train teachers "in the modern methods of teaching science by observation and experiment." And, finally, the Catalogue announced that advanced students might obtain special instruction in various departments of science by making arrangements with the appropriate professors. The degree of Doctor of Science was established a year later.

In the same year the right to room in the College dormitories was accorded to the students in the Scientific School and School of Mines.

This elaboration of the course of study in the scientific departments was facilitated by economies that were effected by transferring all the classes in Chemistry and some in Physics to the College Laboratories. The new

[1] See page 96.

rule which allowed students in any department of the University to enter classes in any other made this possible. Gibbs, Eliot's former rival, was relieved of instruction in Chemistry. His chair being the Rumford Professorship of the Application of Science to the Useful Arts, the subjects of Heat and Light were assigned to him, and he was provided with "a lecture-room, a cabinet of apparatus, and a physical laboratory of his own," and, "in order that [his] researches in chemistry might not be interrupted,... with rooms for a private chemical laboratory." [1]

Gibbs was not pleased. The private chemical laboratory was very small, barely large enough for Gibbs and his private assistant. So the subject which he had come to Cambridge to teach seemed to have been taken away from him. He became persuaded that he must expect something less than considerate treatment from the teacher whom he had formerly displaced and who had now become his President. The incident furnished the first and I believe the only occasion for accusing Eliot of having treated a man vindictively or unfairly. Gibbs may have expected more attention and awaited better provision for his comfort than it was easy to give him, and perhaps he convinced himself too readily that he was being put upon. Probably it was a defect in Eliot not to be able to imagine how to make an investigator contented. Probably — although he was something of a chemist himself — he did not see where lay Gibbs's true importance as a scientific worker. Such failures of mutual under-

[1] *Ann. Rep.*, 1870–71, 24–25.

standing occur in universities as well as elsewhere, and it would be rash to make assumptions about the personal significance of this one. For upon one point there is no doubt, the changes that affected Gibbs were distinctly in the interest of administrative order and economy.[1]

"What I want to know," Eliot had said to Brush, "is how the École Centrale education and the ordinary American college education are to be made to understand and respect each other. Also how scientific education in this country is to be improved." What was done so promptly in the scientific departments was probably thought of as raising their standards and making for good economy, but not as solving the larger problem. The question remained unanswered for a long time. To be sure, science became more and more domesticated in the College as the years went on; but, in spite of a longer and

[1] "From a material point of view this was a good move... but... it must be considered a serious mistake. Wolcott Gibbs, the first American chemist of that day, was thereby deprived of all advanced students in chemistry, thus reducing the number of his papers to the work of his own hands, and those of a private assistant paid out of his own pocket. I think that if this change had been proposed later, after President Eliot had learned that research was essential to a great University, he would not have made such a mistake." (C. L. Jackson in Morison's *Development of Harvard University*, 259. See also Jackson on Gibbs, in *Harvard Bulletin*, XXXII, 958, May 22, 1930.) Four sentences in a letter to George J. Brush look as if Eliot, although aware of criticism, conceived the question to be essentially one of organization: [May 19, 1871.] "You have heard at New Haven some unfounded rumors which ascribed to me some foolish and one mean intention, all of which you of course disbelieved. But I find that some good men in New Haven were led to think that it was proposed to abridge our scientific teaching, particularly in Chemistry. Nothing could be farther from the truth.... I hope that the publication of our announcement next week will set matters straight abroad, as they already are at home."

richer curriculum and more respectable requirements, the Scientific School did not attract candidates for its Doctor's degree. And it certainly did not cause any marked change in popular sentiment about scientific education. In fact, it did not succeed in turning out technologists as well as the École Centrale, or as well as the Massachusetts Institute.

Before passing on to more personal matters or to the later phases of his administration, there remains one subject that still calls for a word. The story of the first years would be left unfinished if nothing were said about Eliot's Annual Reports. They have already been quoted; they will frequently be quoted again. They are the most ample and truly admirable record to which the reader who desires full information about Eliot's conduct of Harvard's affairs can be referred. Eliot used finally to speak of them as his only and sufficient autobiography.

The series of the President's Annual Reports did not commence with his administration, but he transformed them. Before 1869 they had been vague and perfunctory little documents in which criticisms, if ventured at all, were made in guarded phrases. Their purpose then appeared to be to induce a complacent state of mind. Thus, after the Scientific School had been convulsed over the filling of the Rumford Professorship and Hill had failed to raise a few thousand dollars to provide a professorship for Eliot, he had announced in his Report upon the year that the general course of affairs in the University had been

"smooth and prosperous." Such phrases had been used so often that they had lost their meaning. Eliot broke with this tradition, abruptly and completely. He not only reported fully and precisely about the events of each year, supplementing his own summaries by appending statements from the several Deans, but he also expressed opinions about the state of things, whether favorable or not, with great candor. That style of reporting was unprecedented, and for many years it was fair to say that Eliot's policy of complete publicity concerning "the strength and weakness of the University, whether intellectual, disciplinary or financial was probably not paralleled by any educational institution in the world." [1]

President Barnard of Columbia had put somewhat elaborate discussions of educational policy into his Reports, but they were gentle dissertations compared with the incisive commentaries which were frequently incorporated in the Harvard series after 1869. Although these documents were nominally addressed to the Overseers, Eliot used them as a regular channel of communication with the small, thinking public that was interested in education. He was trying to persuade it to sanction, to require, and ultimately to support better things. As the Reports succeeded each other, their reputation grew and they enhanced their author's prestige. For it was obvious to whoever read them that he was trying to bring out facts that would be truly informing, that he had a grasp of his subject, and that his views, no matter how surprising

[1] C. F. Dunbar, in *Harv. Grad. Mag.* (1894), II, 463.

or unpopular, were not the talk of an irresponsible theorizer, but the proposals of an executive who was making decisions and taking risks.

If, for convenience' sake, we seek a date with which to close this already long chapter, there appear to be good reasons for saying that the first years of Eliot's administration ended between 1876 and 1878. For by then he had finished the initial task of converting the University to a fresh outlook. The College Faculty had been so considerably enlarged and its field of instruction had been broadened so much that a return to the old curriculum of required studies would have been impossible without relegating to idleness a number of teachers whose abilities were appreciated. Within the College Faculty and the Governing Boards the elective system had, in principle, been accepted completely. Discussions that went on during the academic year 1878–79 culminated in the elimination from the Sophomore, Junior, and Senior years of all prescribed exercises except the study of Rhetoric and the writing of themes and forensics.

Again, the reforms by which the professional schools had been committed to the maintenance of as high a standard as possible had so far won favor that the Faculties would not have receded from the ground already gained even if Eliot had resigned. One incident that might be cited as proof was the step by which the Law School voted to require all candidates for admission who had not an A.B. degree to pass special examinations, and

then extended its course to three years. This advance, like most of the subsequent changes in the Schools of Law and Medicine, proceeded from the initiative of the Dean and Professors and required only to be supported and defended by the President. Thereafter Eliot never had to supply so much of the initial momentum to reforms as during the first five years, nor ever again to bear the brunt of another struggle like the one he had begun by precipitating in the Medical School.

It also happened that between 1876 and 1878 a number of the men who had been Eliot's close associates died or detached themselves. Gurney resigned the deanship of the College in 1876 and was succeeded by Charles F. Dunbar. The "six elderly gentlemen" who composed the Corporation that elected Eliot to the Presidency, and who continued in office until 1875, had, all of them, to be replaced during those two years.[1] The principal governing board was thereafter composed of Fellows whom he had a voice in selecting and who, knowing the drift of his policies, agreed to serve with him. In 1878 they were Francis Parkman, Martin Brimmer, the Reverend Joseph Henry Thayer, John Quincy Adams, Alexander Agassiz, and Edward W. Hooper, the Treasurer.

[1] Eliot would never, he said, cease to remember them "with gratitude and affection... on account of the consideration with which they treated him, when, a very young man, he entered on his responsible duties, and of the encouraging confidence which they always manifested in him." (*Ann. Rep.*, 1877–78, 3.)

CHAPTER IX

The presidential personage — A masterful workman — Friends and advisers — Eliot's aloofness — Unpopularity with the students — Domestic life — Religious views — Yachting and camping in the summer — Attack upon the National University project — Visit to England — Mrs. S. A. Eliot's death — Engagement to Miss Hopkinson — Two letters from the Sunshine — Second marriage in 1877 — Northeast Harbor

In the last two chapters Eliot's reflection has been followed as it appeared in the changing current of the University's affairs. There will be occasions to seek it there again, but this chapter will be more personal.

In a college community whoever happens to be the college president becomes a personage, if he will but live the part. "I am getting used to being treated with distinguished consideration," wrote Eliot to his sister-in-law (January 26, 1870). "Official station is a curious power. There is lots of human nature in the saying *à tout seigneur tout honneur*; even when the seigneur is a mean or inadequate person, the station is still sacred." One has to remind one's self that he was still depressed by his recent bereavement and that his ambitions for the University outran anything he could hope to accomplish within a measurable term of years to dismiss a suspicion of conventional self-diminution when one reads the words "mean and inadequate." To distrust himself was not natural to him, and it would be hard to imagine whom he could

have pointed to as being better able to take up the tasks he was attacking. No one, no matter how unsympathetic, would have denied that he filled the presidential rôle in demeanor, in action, and in word. In fact he filled it fuller than it had been filled since anybody could well say when. Clearly — the whole University could feel it — the petulant and ineffective administrations that had been bringing the office of President down in general estimation during the preceding twenty years had come to an end. "We have a real captain at last," exclaimed James Russell Lowell.[1]

Lowell might have called him an inspector-general quite as justly as a captain. Holmes's remark that he studied the University as had no other president has already been quoted. Wherever any of the business of the institution went on, he looked in; no one's *sanctum* remained undiscovered. He soon knew all about every officer of the University and many students and he kept track of their affairs. The questions he asked them extended to personal and domestic details. Do you (an instructor) have private resources other than your salary? What doctor did you call in when your wife was ill? Do you make it a practice to see that there is enough fresh air in your lecture-room to keep your students awake? How many servants did you find you needed in the house you have hired? That he could propound so many questions without being cursed for a meddlesome busybody could be explained only by the supposition that it was patent to

[1] *Letters of J. R. Lowell*, edited by C. E. Norton, II, 51.

all that here was a masterful worker. Such, noticeably, was the impression made by each initial interview. When the Medical Faculty, sensing electricity in the air, convened in Dr. Henry J. Bigelow's house for its first formal meeting five weeks after the inauguration, the young President marched in, took the head of the table, called the gathering to order, and proceeded to business without so much as allowing Dr. Bigelow the moment he required for the delivery of a carefully prepared little speech. "In the twinkling of an eye it was obvious that, *de par le Roi*, there was a new administration," and in the same instant Bigelow's opposition began to bristle.

There were no stenographers or typewriting machines in those days, and Eliot answered his mail with his own hand and filed it in the pigeonholes of his excellent memory. Official correspondence would have consumed an excessive amount of time if he had not confined it to essentials. He had cultivated habits of industry from boyhood; now he was forced to practice the art of using every minute. His brevities were abrupt, and his excursions into matters that one did not expect to have taken up were over before one recovered from one's surprise. A caller who went into his office without having prepared himself for the interview was likely to be dismissed in a disconcerting manner. But a visitor who knew what he wanted to say, or from whom Eliot wanted to learn something, might find that listening was what the President had most time for. He cross-questioned, but he put his questions one by one and waited for the answer to each.

To appraise people became a great part of his business and he wanted, too, to clutch whatever useful facts or good ideas they could give him. One way to get facts was to ask direct questions; he put the least of them with a manner that made it impossible to return a trifling answer. One way to appraise was to allow men the utmost latitude in speaking to — or even away from — the questions that came up in Faculty meetings; as presiding officer he tolerated wandering talk with a serenity that frequently exasperated everybody else except the talker. Years before he had remarked that a faculty "is a ruminating animal; chewing a cud a long time, slowly bringing it into a digestible condition"; and "progress comes mainly from the Faculties" was what he said in the Inaugural. Everybody must be patient. What if the animal did sometimes stop chewing the cud and go a-wandering? By being patient Eliot was learning how much weight to attribute to the characters and opinions of the different men with whom he was working.

The advisers whom he consulted most frequently were near by and he could talk to them whenever he wanted to without having to correspond. Among them the one he relied on most during the first years was Ephraim Gurney, the College Dean. Gurney had graduated from the College in the class just ahead of his own, was an intimate of the earlier teaching years, had been his "candidate" for the presidency, and was in the main heartily in favor of the new program. He did not possess the gift of inspiring the undergraduates and so his memory has faded

while those of some of his contemporaries have remained green; but as a coadjutor in the reorganization of the University he could hardly have been surpassed. By taste he was a classical scholar and lover of history and literature. His sympathies were wider than Eliot's and he had excellent discernment. For example, he is supposed to have suggested making Henry Adams an Assistant Professor of History and to have used his personal influence to bring Adams to Cambridge. Finally he was a man of the world — a quality which is sometimes missed in persons of academic consequence. Then there was F. J. Child, next-door neighbor of the Kirkland Street days, to whose house Eliot "liked most to go"; and James Walker, who had been a frequenter of his father's house on Beacon Street while Eliot was a boy and for whom he had made up Corporation dockets while Walker was President. He had a warm feeling for the older man and valued his counsel. It became his habit to walk up to his house on Brattle Street after chapel of a Sunday morning and talk with him about College affairs for an hour. Theodore Lyman was a trustee of the Agassiz Museum and was doing work of his own there. He was also an Overseer. So he was frequently in Cambridge. When the problems of the Scientific Departments were in question there were Asa Gray the botanist and Jeffries Wyman the anatomist, both sagacious as well as learned, both men such as Leslie Stephen might have had in mind when he said "The best Yankee is about the best of mankind." For the character and opinions of Wyman, Eliot felt a quite special regard. The

member of the Corporation with whom it was most pleasant to talk matters over was Dr. Putnam, who had been a family friend for more than a generation, and who had performed the marriage ceremony for Ellen Peabody and him. The President always considered that Putnam was the most eloquent preacher he ever listened to. He used frequently to drive himself over to Roxbury for a talk with the old gentleman. Storer, with whom Eliot had always worked happily in the Laboratory, whether in Cambridge or the Institute of Technology, was not a man of judgment in affairs, and it was essentially with affairs that Eliot was now concerned. He still saw him not infrequently, however, for Storer had married his youngest sister Catherine Eliot in 1871, and the Corporation appointed him Professor of Agricultural Chemistry and Dean of the new School of Agriculture and Horticulture which had just been established at Forest Hills on a part of the Bussey Farm. Eliot's immediate predecessor, Thomas Hill, who would hardly have been consulted much if he had been at hand, had withdrawn to a parish in Portland, Maine. Although he was chosen to the Board of Overseers for a term in 1871 he served for only two years. One day soon after Eliot had been elected President, he met Hill on the street and said to him with the formal manner that made a casual proposal seem like a command, "Mr. Hill, you're not using your presidential gown any more. If you don't want it, I should be glad to have it." Eliot intended to pay for the gown, but Hill's sensibilities were rasped, and he told of the incident with

some resentment. George Brush in New Haven was probably the only person outside the Harvard community to whom Eliot occasionally wrote for advice as he might to an intimate.

All these men except Lyman were Eliot's elders, some of them old enough to be his father. Among the others who were connected with the University in one capacity or another there were few if any with whom he talked unreservedly or in whose presence he forgot the responsibilities of his position. There was opposition enough in every Faculty and Board, except perhaps in the Corporation, to make him guard his tongue. His critics thought he was destroying all the good old traditions. They felt very blue, and could not, from their side, meet him sympathetically. Miss Torrey, the sister of a reactionary old member of the College Faculty, told Francis G. Peabody that whenever she thought of the deceased Mrs. Eliot it comforted her to reflect that "dear Ellen had not lived to see what the College had come to."

The state of College sentiment has been recalled very justly by Bishop Lawrence, who graduated in 1871. "We looked," said he, "to old Dr. Peabody in the seventies and eighties as the heart of the College. He represented the affection, emotion, friendship. Eliot represented the administration and organization." [1] This was certainly owing, in part, to Peabody's well-established priority in the fond regard of the Harvard world. But it was also due to Eliot's own manner and character. It was

[1] Quoted by Cotton, p. 215.

his belief, he once explained, that the President should live like the captain of a ship, who eats alone. He must never be charged with playing favorites; he must not be tempted by friendship to falter in the service of the institution whose welfare was confided to his care. He must be ready to say No as often as Yes, and to disappoint frequently. He must be explicit when it hurt another's self-esteem to state the exact truth, lest he should leave room for misunderstanding. He tried so hard to avoid arousing hopes which it might not be possible to fulfill that his candor was disconcerting and sometimes unnecessarily discouraging. He knew that it must fall to his lot to enforce every harsh decision that might have to be made. Hard decisions did have to be enforced now and then, and the good and sufficient reasons which dictated them were not always publishable. It was necessary to refuse reappointments, sometimes necessary to ask for resignations. This, I am told by Dr. Walcott, he never did except in response to departmental prompting or urging that had convinced his judgment. But in such cases the Department is often loath to come out as the critic of its colleague; it will do no more than advise the President of its opinion. The President, if he concludes to act, must then shoulder the whole responsibility. He must communicate the decision and had best keep his own feelings as well as the names of others out of the discussion.[1] To a questioner who asked

[1] It would be neither seemly nor necessary to retail instances. Yet I feel moved to say that, while browsing in the files, I have come upon the evidence of sufficient justification for the denial of a reappointment or the request for a resignation in so many cases which I had previously heard cited as in-

him, after he had been at the head of Harvard for a few years, to name the quality most essential to a college president, he answered, "The capacity to inflict pain." One feels the sadness as well as the sternness of that bitter reply. If he had not, being essentially a tender man, dreaded appeals to his sympathies on certain sorts of occasion, he would have been less careful to fortify himself behind the barriers of a manner that was already sufficiently formal.

No one who knew him expected him to play favorites or to shirk a disagreeable duty. No one who had eyes to look at him would have dreamt of taking liberties with him. But he did undertake the sea-captain side of his work with conscious resolution. Refraining from every attempt to elicit affection, he was not loved. The men who supported his reforms were no more at ease with him than the others who opposed them. Fortunately, however, his fairness and the fact that he did not harbor personal resentments were soon recognized, and once in a while something occurred that touched him. When he became President there was an Assistant Professor of Modern Languages, E. J. Cutler by name, who had urged his rejection by the Overseers in '69, and who, during the next year, criticized his policies with wit and vivacity. Eliot was con-

stances of harshness that I am now unwilling to give credence to any account of such an incident that appears to be derived from the disappointed man or his friends. If they had to acquiesce in the reasonableness of what was done, they were likely to complain that "it should have been done more considerately." That is the way people are. One knows it without studying the history of Harvard University.

vinced that Cutler was a good teacher, however, and promoted him to a full professorship in 1870. One day he was hastily summoned to Cutler's rooms in Holworthy. "He was dying and wanted to tell me before he died that he was sorry for many things said in the Faculty in opposition to measures in which I was interested. I told him that he had only exercised his rights as a member of the Faculty and as a teacher; but he repeated with great difficulty that it was not a question of rights but of feelings, and that he was very, very sorry. In an hour he died." Cutler had no family and no definite religious affiliations, and Eliot had the funeral services conducted in his own house.

With the students he ought, one might think, to have been popular, for gradually he swept away the petty disciplinary rules they despised, and gave them more liberty and better opportunities to study what interested them. They should have appreciated his treating them like men and free agents instead of like unreasonable boys. Yet they did not like him. This, it might be argued, showed how undiscerning and trivial-minded they were, and how wrong were Eliot's fundamental assumptions about their capacities. But it were more sensible to admit that a man does not reach the hearts of the young by addressing their heads; he must also show them an amiable side of his nature. The students soon forgot how many annoying regulations Eliot had abolished, and perceived only that he was strict about the enforcement of those that remained. The popular mind, it has been truly re-

marked, confounds justice with mercy, although justice is not merciful. Eliot's justice was more easily discernible than his kindness. The students saw no deeper into him now that he was President than had their predecessors of the fifties when as a young tutor it had been his duty to break up noisy parties in Holworthy Hall. Nothing they heard about him, nothing they could infer from the aspect of the sombrely dressed, closely buttoned-up, and very dignified figure suggested that he had ever been young. If he had once been a boy, he must have been something like the hero of the Rollo books on which many of them had been brought up. Even to-day there may be readers of this page who remember Rollo and, perhaps, Rollo's visit to Paris. While there he took his little sister Jinny for a walk in the Tuileries Gardens. The two children came to a fountain and a large basin of water upon which little boys were sailing toy boats, and they stood fascinated, watching the sport. But after a few minutes Jinny took her brother's hand and said, "I think we ought to go along." Thus gently reminded, Rollo recalled that the day was Sunday and that it was wrong to be playing games. So he turned his back on the French children and their toy boats, and he and Jinny walked away. It seemed easy to think of Eliot as acting like Rollo. When a student who was to be disciplined for an impulsive indiscretion had the audacity to say to him, "There aren't five men in the College who wouldn't have done the same thing, Sir," the President replied, "You should have been one of the five." It ought to have been

impressive; but human nature is not quite like that. Occasionally the undergraduates might hear of an incident that proved how fully Eliot kept himself informed about the welfare of some poor lad who was earning his way through college, or that he had moved out of his house in order that a student who had smallpox might be moved in with his nurses instead of being sent to a wretched pest-house.[1] But it did not alter the image of the President's everyday appearance. The complaint was unreasonably but forever being repeated that he did not recognize the students or seem to see them when they passed him in the Yard. If they touched their hats to him, they did it out of respect for their own code of manners rather than because they hoped for a response, and they were apt to feel a bit foolish afterwards. He looked to them as unsympathetic as a creature of the zodiac at the head of a calendar and loomed above them as altogether the most incomprehensibly superhuman of College officials. If he appeared before a student gathering, it was hard to raise a cheer for him in those days.

[1] This incident occurred in 1873. On a later occasion Eliot sent his boys away and took in a student who had scarlet fever. — Mrs. Minton Warren tells how, when her brother had double pneumonia in his rooms in Thayer Hall [1880], Eliot swept dormitory regulations aside, arranged for the boy's family to occupy rooms adjoining the sick-room, called twice a day, had special dishes prepared at his own house and brought them to the patient. — One afternoon the College office received a telegram requesting that somebody might inform a certain undergraduate that his father had died. It was known that at that moment the student was playing in a football match. When the game ended he was asked to go to his rooms, and there he found the President waiting with the telegram. — Many such incidents could be related. It appears, however, that, for a long while, each one excited a fresh surprise among the undergraduates.

When Eliot moved into the President's house on Quincy Street, he furnished it with not very happily assorted objects that had survived the collapse of the parental fortune in 1857 and his own repeated changes of abode during the last six years. A couple of maids who were old family servants were installed to keep house for him and his two boys. An Irish coachman cared for the horses in the President's stable behind the Scientific School Building and came over to help about the house. When the President gave a dinner or other entertainment, he usually got his younger sister, Mrs. Storer, to spend the night and act as hostess. Visitors, especially of a more or less official kind, were numerous, and he offered them an informal hospitality freely.

In 1870 two Englishmen, Albert V. Dicey and James Bryce, visited America for the first time. The visit was a memorable one, which had important sequences, in Bryce's case especially, and it opened an acquaintance with Eliot which ripened into lifelong friendships. Fortunately, Dicey wrote about what happened to him and his description of his descent on the household at 17 Quincy Street follows:

"Boston, October 3rd. Here I am for probably three or four days in the house of a man I have never seen, with whom I have no acquaintance, and of whom I hardly know whether he is married or not. I have begun my visit by waking up the house from their sleep, found my host out, and know nothing except that we breakfast tomor-

row at seven in the morning. All this happened in this manner. I called yesterday on Eliot, President of Harvard. I did not find him, and left my note of introduction. I was out most of the afternoon, and in coming in late to my Hotel found an invitation from Eliot 'to make myself at home at his house and bring myself and luggage.' The invitation was so cordial, and the advantage of accepting it so manifest, that I at once resolved to do so. It was too late to expect dinner, so I had to get it. I had to wait long for a car, and then drive three miles. The result is that I arrived at 10 P.M., the whole house in bed, and Eliot out. I had to ring them up. They are very good-natured and have just shown me to a nice room. But the whole situation is slightly absurd. Certainly without meaning it, I have made myself 'at home' with a vengeance. ... [Later.] Eliot is more like a young Oxford fellow than any man I have seen here. His manners are very quiet and polite, but he has a curious way of introducing sarcasms into what at first sight appear purely commonplace remarks. He is very zealous about his University and does a great deal of work for it, but has also a kind of anti-enthusiastic tone which is extremely like that of an Oxford Common Room. He was specially humorous about our zeal in investigating the subject of women's education, and laughed a good deal at us. Our desire to know female professors specially amused him. He, however, had given a great deal of attention to the question of female education and had, I gathered, come to the conclusion that, though much might be done for it, a mixed educa-

tion was not possible in settled countries or in England. In a quiet way, he laughed a good deal at what he called our English fondness for 'slang,' *e.g.* in using 'gone off' for 'declined.' I think generally he thought we hardly had the dignity of a professor and a fellow. Of his kindness and consideration I can hardly say too much." [1]

In the absence of guests, Eliot and his two boys, aged eleven and eight in 1870, were the family.[2] The youngsters often had to wait, hungry and impatient, for the meals which occurred when it suited their busy father's convenience. But in the early morning, before they went off to their school, and at the end of the day, he gave them as much time as he could. If he drove out to call on some one of an afternoon, he took them with him, and as soon as they were big enough to straddle a pony, one of them usually galloped along beside his large horse when he took a ride. He encouraged them to familiarize themselves with the country about Boston by exploring its historic scenes, just as he had scouted over the Revolutionary battle-fields during the Saturdays and holidays of his own boyhood. On Sundays the two sat with their father in the College Chapel, but it was not demanded of them that they should follow the sermon and Eliot did not trouble their young heads with points of creed and dogma. "It takes an adult," said he, "with a tendency to

[1] R. S. Rait, *Memorials of Albert Venn Dicey*, 61–62.

[2] This has been found in a letter to Anna Peabody, dated Jan. 26, 1870. "Today mother is coming out for a little visit; but the boys have seen very little of ladies since October 1st. I don't like to go where there are ladies. Men are all very well. Mrs. Child's is the house I like best to go to."

metaphysics to get anything out of a catechism. Will not a child unconsciously get religion out of poetry, if it be well selected?" And, "I have tried it with my own children and found it successful." A memorandum which Dr. Samuel A. Eliot has supplied may be quoted. "My brother and I repeated hymns or poetry in our boyhood, always on Sunday nights and often on weekday nights. I can remember, when a boy, attending the College Chapel, that it was my father's custom at the opening of the sermon to hand me the hymn book and during the sermon I learned the hymns on the pages indicated. I know scores still and my father probably had an equal resource. In those days the hymns which my father particularly liked were the old-fashioned pious hymns. After my mother's death he was fond of certain hymns of immortality. But on the whole he did not care for hymn tunes that were melancholy or in a minor key." The memorandum adds: "In later years he wanted most what I have called hymns of courage and spiritual adventure. If, as he grew older, his taste changed I think it was only by the gradual elimination of all the hymns which I have called introspective. More and more his motto was that of Dr. Hale which he often quoted and thoroughly illustrated: 'Look up and not down; look out and not in; look forward and not back, and lend a hand.'"

Just when the paragraph next to be quoted was written is not clear. For though Eliot's manuscript concerning "the place of religion in a college," from which it is

extracted, appears to have been written in the seventies, it bears no date. But that need not matter. All devout and thinking men were trying to reconcile their religious opinions with the new scientific cosmology, and in Eliot's case the adjustment did not have to be violent and was not sudden:

"If the universe, as science teaches, be an organism which has by slow degrees grown to its form of to-day on its way to its form of to-morrow, with slowly formed habits which we call laws, and a general health which we call the harmony of nature, then, as science also teaches, the life-principle or soul of that organism, for which science has no better name than God, pervades and informs it so absolutely that there is no separating God from nature, or religion from science, or things sacred from things secular. They can show that this scientific conception of God, if not the same as that held in any organized church, is nevertheless a religious conception, and one which can be most easily presented to the popular mind in consecrated phrases which are as ancient as they are simple. I notice that when men have thoroughly ransacked the storehouses of science, and have grasped the full meaning of its new doctrines, and then wish to put before common people some just conception of the Transcendent Intelligence, they cannot find any better words than such familiar sentences as these — 'underneath are the everlasting arms,' a sparrow 'shall not fall on the ground without your Father,' 'in Him we live and move and have our being.'"

It may be noted in this connection that one of Eliot's favorite hymns was the one by Dr. Holmes which contains the verse

> "Our Father! while our hearts unlearn
> The creeds that wrong thy name,
> Still let our hallowed altars burn
> With faith's undying flame."

The summer days which Eliot began, whether on a boat or ashore, by rousing his party to lead them, with his fine bass voice, in singing a morning hymn, may be thought of as commencing in 1871, when, in a letter to Brush written on May 19, he imparted a bit of news that was to have long and happy consequences.... "Being determined (D.v.) to have a thorough vacation this summer, I have bought a 33-foot sail-boat as a preliminary measure. What have you devised for the summer? I propose yachting and camping out in tents down Mt. Desert way." A little student's notebook, still undamaged after serving as a log-book to the extent of its capacity contains these first entries:

"C. W. E. bought the sloop Jessie in May, 1871. She was 33 feet long over all, and had four berths in the cabin; a very pretty boat and tolerably fast. In May she sailed in a race of the Dorchester Yacht Club and won against the Mary. In June went on two or three excursions in Boston Bay, upon one of which she nearly capsized off Fort Warren and got ashore on Lovell's Island. Mr. Winlock, Mr. Peterson and C. W. E. were aboard, with Kelley and Hunt of Neponset. W. P. and E. walked all the way home from Neponset arriving at 2 A.M.

"Saturday, July 8, 1871. Sailed from Boston at 5.05 P.M. C. E. Guild, R. W. Guild and C. W. E. in cabin, Kelley and Stark forward. Beautiful evening.... [The details of the eastward run, buoys and beacons and when they were passed, wind and weather, brief notes on the places where the Jessie was anchored follow in due order, until —]

"Thursday, July 13th. Started [from Southwest Harbor] at 5 A.M. with light wind. Got becalmed off Great Head. At last got a southerly air and reached Ironbound. Exchanged salutes with our toy gun with 7 yachts of Eastern Yacht Club off Schooner Head. C. E. G. and C. W. E. examined Ironbound, but could find no camping ground. Got directions for Calf Island from old Jacobs. Reached the island about noon. Found it beautiful but could not discover any springs. Stark rowed a mile to the mainland, found a Mr. Doane who came off and showed us the water. C. W. E. then went to the main land and found a representative of the Stover owners, — Mr. Jellison in a field below Geo. Stover's house — a brother in law — he said we might camp on the island. C. W. E. returned at 4 P.M. and some tents were taken ashore and pitched on the hill above the old wharf.

"Friday, July 14th. Laid the Jessie ashore and discharged her whole cargo. Lugged it down to the S.W. point of the island and established there C. W. E.'s first camp.

"Saturday, July 15th. Sailed over to Bar Harbor and got Agnes and the boys.

THE CAMP ON CALF ISLAND LOOKING ACROSS TO MOUNT DESERT AND BAR HARBOR

From a sketch by Charles Eliot, Æt. 15

"Wednesday, July 19. Henry, Fan and Mary arrived at Bar Harbor and went over in the Jessie to camp. Rainy evening." [1]

Observe the expression "C. W. E.'s first camp." So far as can be discovered there was no change of camp during the summer of 1871, and so it looks as if he knew already that he had found a way to enjoy a succession of pleasant vacations. During the six years that ensued, a summer camp was established on Calf Island for five seasons. In seventy-three it was set up on Nonamesset, adjoining Naushon Island, between Buzzard's Bay and Vineyard Sound. In character these were small tent colonies. Eliot had one sleeping-tent of his own, the two boys another. There was a large dining-room tent, and several more tents were arranged for guests, for a kitchen, and for the necessary services. The yacht was usually moored close by. Its steward was then camp cook. Until the boys grew bigger, and when there were ladies in the party, there was usually a maid in camp. Eliot ran the commissariat, arranged and led exploring expeditions and picnics, and was, in short, skipper, shore commander, housekeeper, host, and organizer of entertainments.

A sense of novelty and adventure was part of the fun. Summer camping was comparatively rare then, and so was cruising on the New England coast. In 1872, the Government had not yet issued charts for the eastern coast of Maine. The first edition of a little manual called

[1] Henry was the Reverend Henry Foote, who had married Frances Eliot — "Fan" —, and Mary was their daughter.

the "Atlantic Coast Pilot" had been issued, and when it was announced that a revised edition was being prepared, Eliot wrote a letter to the Coast Survey that would fill twenty pages of this book with exact bits of information about steering marks and directions, sensible recommendations about the use of familiar language, and suggestions for typographical arrangements that might make it easier to consult the "Pilot" quickly. The editors of the new edition seem to have followed a number of his recommendations.

The Jessie was superseded, after one season's use, by one of the first American yachts designed especially for cruising along the New England coast. The logbook says that, "In the spring of 1872, C. W. E. had the sloop Sunshine built by Albertson Bros. of Philadelphia on purpose for cruising with a small crew. She was $43\frac{1}{2}$ feet long on deck, 15 feet beam, 6 feet deep, 4 ft. draught aft, with a cabin which C. W. E. could stand erect in, a short mast, short boom, and good sized kites." The Sunshine proved to be a comfortable and useful boat, and also fast enough to keep up pretty well in her class. Her after cabin was large enough to accommodate Eliot and his two boys and a guest or two. Forward she carried a steward and one sailor.

Between Watch Hill, Connecticut, and Eastport, Maine, there were few harbors and river-mouths into which the Sunshine did not sail during those summers. But she spent most of her time along the beautiful coast of Maine, and there Eliot soon formed a lifelong attach-

ment to Mount Desert and the islet-strewn waters whence seafarers look landward to the shadowy shoulders of Green Mountain or seaward upon the limitless Atlantic. The hamlets along the Maine coast were still fishing and trading settlements whose people included farming among their occupations. Summer folk had not taken possession in the seventies. Practically everything that stirred moved under sail. On many an island where fir trees are now growing thick, green pastures, scarred here and there by ledges of gray rock, were cropped by sheep and cattle. The little painted dwelling-houses gleamed dazzling white in the sunshine. It was an easy matter to step ashore and procure milk and eggs. On the boat or at the camp the party frequently included members of the Eliot and Peabody family connection and friends who, like Dunbar, enjoyed sailing. Once away on these holidays, Harvard and his ordinary cares seemed to drop out of Eliot's mind. The sea, the wind, the day and its small adventures, the procuring of supplies, the sailing of the boat absorbed him completely. He ordinarily went captain and pilot until his sons were old enough to manage the boat. According to amateur standards he was a competent yachtsman. He took no great risks, but made it a rule to get along without a pilot, and he had only one bad mishap. On that occasion the boat was dismasted because a chainplate broke during a heavy northwest blow. F. G. Peabody, who was along, said he was more frightened by hearing Eliot exclaim *The Devil!* than he was by the fury of the gale.

It was an excellent summer regimen for the boys. They learned to sail, to use the charts and the "Coast Pilot," became familiar with the whole Maine coast, and became interested in the adventures of the early explorers like Cabot, Champlain, and Smith.[1]

As the years rolled on, Eliot was often to appear as a participant in public discussion. His "Atlantic Monthly" articles, the Inaugural Address, and his Annual Reports were all, to a greater or less extent, addressed to the world at large, and in 1873 occurred the first occasion on which he took sides in a public dispute about a question of immediate action, and did so in a way that influenced the outcome. In that year there was a movement on foot to induce Congress to establish a national university in Washington. Nominally the idea was put forward by an imposing committee of the National Education Association, and an impression was thus conveyed that the membership of the whole Association was behind the plan. At the annual meeting in August, Eliot presented a paper which began by examining the authority and powers of the committee, proceeded to assert that its members had never convened and that its chairman had no warrant for speaking as if he represented its conclusions or the views of other members of the Association, went on to heap criticism and scorn upon the main provisions of the bills that had been introduced in Congress, and closed by

[1] See further, *Charles Eliot*, chap. II, in which there are numerous references to summer camping and cruising.

arguing against a national university anyway. In short, it was a thoroughly bellicose document. A group of gentlemen outside the Association, who agreed with Eliot, reprinted his paper and circulated it widely during the following winter.[1]

To the first part of this paper not much could be replied, because the national university scheme had truly been the project of a few individuals and was framed badly. But, with respect to the question whether a national university, supported by taxation, should have a place in America's educational structure, a number of counterblasts came from the land-grant colleges and the new State universities, for Eliot had said sweepingly that higher education ought to be supported by endowments rather than by Government. Witness a quotation from his final pages:

"... With the continental nations of Europe, it is an axiom that the Government is to do everything, and is responsible for everything. The French have no word for 'public spirit,' for the reason that the sentiment is unknown to them. This abject dependence on the Government is an accursed inheritance from the days of the divine right of kings. Americans, on the contrary, maintain precisely the opposite theory, namely, that Government is to do nothing not expressly assigned it to do, that it is to perform no function which any private agency can perform as well, and that it is not to do a public good

[1] Theodore D. Woolsey, B. R. Curtis, Henry C. Lea, C. J. Stillé, Henry C. Carey, C. F. Adams, George William Curtis, E. L. Godkin.

even, unless that good be otherwise unattainable. It is hardly too much to say that this doctrine is the foundation of our public liberty.... [Latterly, for certain reasons, we have] subsidized railroads, and steamship companies, and agricultural colleges, and now it is proposed to subsidize a university. The fatal objection to this subsiziding process is that it saps the foundations of public liberty....

"Let us cling fast to the genuine American method — the old Massachusetts method — in the matter of public instruction. The essential features of that system are local taxes for universal elementary education, voted by the citizens themselves; local elective boards to spend the money raised by taxation and control the schools; and, for the higher grades of instruction, permanent endowments administered by incorporated bodies of trustees. This is the American voluntary system, in sharp contrast with the military, despotic organization of public instruction which prevails in Prussia and most other states of continental Europe. Both systems have peculiar advantages, the crowning advantage of the American method being that it breeds freemen." [1]

To say that there was a sophomoric quality in this would be to apply to it a strong expression; but certainly the paper was not as bland in style nor, as to matter, so difficult to impeach as Eliot's controversial utterances

[1] From "A National University." Report made by Charles W. Eliot to the National Education Association, Aug. 5, 1873. *Addresses and Proceedings, Nat. Educ. Assn.* (1873), 107. Also as a pamphlet, Cambridge, Charles W. Sever, 1874.

later became. In the course of the argument he had quoted Mill. The paper shows that he carried the *laissez-faire* philosophy of the Benthamite school to its extreme implications in his own realm of higher education. This was his way of thinking, although he had encountered no such thorough organization of the field of learning as he had observed in France under the Second Empire, and in spite of the fact that the admirable universities of Germany were supported by the State. He brushed such adverse precedents aside by remarking that the educational and governmental traditions of France and Germany were obviously and profoundly different from ours. But it is somewhat remarkable that he ignored a considerable body of American experience that invited his analysis. On this point Andrew D. White picked him up. Almost all American endowed colleges had been founded by denominational zeal. In the older States of the Atlantic Seaboard they were outgrowing sectarian influences; but White pointed out that the experience of the newer States with endowed colleges had been wretched and was continuously unsatisfactory. He compared Ohio, where there were nothing but sectarian institutions, with Michigan and her liberally projected young State university, and concluded: "Let me sum up the whole case, based on actual facts.... In not one of our states outside the original thirteen, has there yet been established by private enterprise or sectarian zeal a college or university, with a faculty approaching completeness as to numbers, or with a general equipment which

reaches mediocrity. In the whole number of such sectarian institutions there is not one complete faculty — not one library, laboratory, observatory, or illustrative collection worthy of even the third rank — even judging by our American standard. This is the outcome of nearly a century of effort, under the principle of scattering resources for advanced education in accordance with the demands of sectarianism rather than concentrating them in accordance with the plans of statesmanship." [1]

Eliot did not recede, however. He was a *laissez-faire* man, not only because his up-bringing had admirably prepared his mind for the ideas that the utilitarians had put into currency; but because of what might justly be called a compelling temperamental bias. It was also according to his character to speak out. C. E. Norton wrote to applaud and praise the assault on the national university project, and under date August 15, 1873, Eliot replied from his camp at Nonamesset: "... It is small virtue in me to speak plainly. It is rather an Eliot quality — some people would say — vice. Then I am singularly independent in position, having no debts to pay except those of love and friendship and no ambition except to do my work as well as I can. Many men I meet are afraid to speak their thoughts because they do not wish to offend people to whom they owe something or from whom they hope something. Some think it no use to growl, or to

[1] Andrew D. White, "A National University." *Addresses and Proceedings, Nat. Educ. Assn.* (1874), 58, 59, 72.

oppose evils which their temperament makes them think inevitable."[1]

Eliot knew that his position as President of Harvard lent to his views and utterances a weight with the community that they could not have carried had they been expressed by John Jones, private citizen. So much the better! It did not occur to him to be afraid of compromising his office by acting independently and aggressively concerning any civic or social issue that enlisted his interest. There seem to have been only two definite limitations that he imposed on himself. He made it a rule not to appear in political meetings outside of Cambridge or Boston, and elsewhere he refrained from advertising his Unitarianism. "These limitations," he once observed, "do not agree very well with my natural disposition and inclination; but they seem to me to be fair official restrictions." Mr. John Graham Brooks relates that he once invited Eliot to talk to a small audience of working-men in Brockton, and being pleasantly surprised that the President should find time for such things, asked him why he did it. The immediate reply was, "I know no better

[1] From a letter to C. E. Norton, Aug. 15, 1873. (MS. among the Norton Papers, Harvard University Library.) The idea of a national university showed a persistent vitality. In 1899 a committee of fifteen college presidents and educators was appointed to report on it by the National Council of Education. Its chairman was President Harper of Chicago. Eliot was an active member. The committee adopted several resolutions which he proposed, and it reported (1901), in substance, that there was no need for a national university; that it was the function of the Federal Government to encourage educational instrumentalities without controlling them, but that in certain ways the governmental departments might contribute more largely to research and education.

way to show young men that they should interest themselves in the duties of citizenship." This was, in fact, one way in which he lived up to his belief that example is worth more than precept. It was his conviction that he exerted a useful influence within the Harvard community as well as outside it by participating with readiness and candor in the discussion of public issues.

Although in the seventies he had not yet had much experience in public speaking and debating, he was already very effective. Mr. Brooks again supplies an illustrative recollection. There was an active agitation in favor of the higher education of women at that time. A meeting occurred in Boston at which Wendell Phillips was to speak on the subject and in favor of admitting women to Harvard University. The President was to have an opportunity to reply. Wendell Phillips was a hero of Mr. Brooks's, and he went to the meeting for the pleasure of hearing him. He was predisposed in favor of his thesis anyway. As he listened to Phillips's eloquent argument, he sat wondering what could possibly be said in reply and feeling sorry for the young President who had got to stand up to the old orator. In time Eliot spoke, without rhetoric, simply presenting the facts and the practical considerations which must govern the decision. The result was that no doubt about the necessary conclusion remained in anybody's mind. It seemed a most astonishing victory, and from that day Mr. Brooks regarded Eliot as one of the great men of the community.

In the spring of 1874, Eliot went to England in order to inform himself about certain aspects of English education and to talk with people from whom he could learn. During a two months' stay he visited Oxford for two or three week-ends, spent several days at Cambridge, a week in Edinburgh, and most of the remainder of his time in and about London. The streets of London kept reminding him sadly of Ellen Peabody, for she had been with him during the otherwise solitary prowlings of his earlier visit. But in most ways the experience was novel and cheerful. Having now become a bit of a personage as well as a good deal of a person, being already acquainted with James Bryce, A. V. Dicey, G. C. Brodrick, and with others who were as eager to help him as were these, and being well supplied with further introductions, he found that breakfasts, luncheons, and dinners rained upon him as it is possible for them to rain only in Oxford, Cambridge, and London. "What a lot of talking I do indeed," he exclaimed in a letter. "Incessant discussion.... I have got in with the liveliest men, and in argument I have to keep my wits clear." The brief and hurried bulletins that he posted to his mother by every mail name three or four score of interesting men and women with whom he had eaten or walked and talked, and the list could doubtless be prolonged. He spent one Oxford Sunday with Jowett, had a talk with Darwin, saw a good deal of Bryce, Dicey, Brodrick, less of Leslie Stephen — but enough to like him very much — something of John Simon, Sir John Clarke, George Rolleston, Matthew Arnold, Max

Müller, Francis Galton, Sir John Lubbock, Hutton of the "Spectator," and Dr. John Brown and Sir Alexander Grant in Edinburgh. It would be idle to go on, for just what commerce he held with any one of the different people with whom he discussed "incessantly," he failed to report. The gross total of it all was that he visited and "inspected" four universities and several schools from Eton down to Board schools and a school for paupers. One of the few comments he vouchsafed to his mother was that now he would at least know something about what Americans who cited English and Scottish experience at him were talking about — which would be more, he added, than they usually knew themselves. It is interesting to gather from his bare enumerations of his engagements that he digressed a little from education in order to spend a day in the Government offices trying to find out more about the workings of the Civil Service, and pleasant to find that he did not miss the University boat-race, and that he spent a day at Kew with Mr. and Mrs. C. S. Sargent. Although he had good cause to be "sometimes slightly exhausted by feasting and talking," it appears that some of the feasters made his time pass merrily. "Edinburgh was fine.... The Scotch are full of humor.... I had great fun lunching and dining with a number of University men. They were uproarious and amusing 'to a degree,' so that I laughed till I cried." What could those Scottish jests have been? There were people in Cambridge who would gladly have known.

In 1875, Eliot's summer on Calf Island was interrupted by his mother's last illness and death. Although his home and hers had not been under the same roof since he left the Kirkland Street house in 1865, he had seen her regularly and frequently whenever he was near Boston, and when he was abroad he sent her a full chronology of his engagements and doings by every post. She, on her side, followed his activities with intense pride. So he could say to Norton that her last five years had been "wonderfully happy and bright" and that her grandchildren would have a very cheerful remembrance of her. But he added, "I shall miss her unspeakably."

It is noticeable that Eliot had always had women of his own family about him or near him. As a boy he had grown up in a house full of sisters. It was when the family home and habits were violently dislocated by his father's failure that he married Ellen Peabody. He and his wife then became established in one half of a double house whose other half his parents and unmarried sisters occupied. When Ellen Eliot's health began to fail, the Eliots and Mrs. Peabody and her unmarried daughter Anna combined their households and continued to live together like one family, whether at home or abroad, until Eliot took his two boys with him to the President's house in the autumn of 1869. The good will, the devotion in fact, with which he played the part of son and brother to all these women shows how sympathetic to him was their proximity. Now his mother had died; his own sisters had all found husbands and homes for themselves,

and Anna Peabody had married the Reverend Dr. H. W. Bellows and had removed to New York.

Whether Eliot had met Miss Hopkinson before this is not certain. But there is a story in the family that one day when he was passing Saint John's Church in Cambridge he was struck by the voice of a singer in the choir, and that he soon informed himself that she was Miss Grace Hopkinson, the daughter of Thomas Hopkinson (one-time lawyer, judge, and president of the Boston and Worcester Railroad), and Corinna Prentiss (Hopkinson).[1] In addition to singing charmingly, she took parts in the plays of an amateur theatrical society which used to give three or four entertainments a winter. It was observed before long that Eliot would let nothing prevent him from attending the performances in which she appeared. Their acquaintance progressed. When he sent her Shakespeare's Sonnets, explaining that the print and binding were not as dainty as they should be for her use, and asked to consult her about the "difficult undertaking of writing an inscription for the Soldiers' and Sailors' Monument on Boston Common," she probably guessed, as the reader may, what was to come next.

The following exchange of letters with Lyman speaks for itself:

CAMBRIDGE, *July* 11, 1877

DEAR THEODORE, — You disappeared mysteriously from the Overseers' meeting before I could seize upon

[1] See *Thomas Hopkinson, New Englander, 1804–1856.* Edited by L. W. Hopkinson with an introduction by C. W. Eliot. Privately printed. Washington, 1922.

you to tell you about my engagement to Miss Grace Hopkinson. She is simple, straightforward, courageous and devoted — also good-looking, though short. She is twelve years younger than I am, comes of good stock, has had a straitened life as regards money, but has been plucky and happy notwithstanding. As the greater part of her character appears in her face, carriage and speech, you and Mimi will do well to see her at her mother's (father dead), 5 Phillips Place, Cambridge. I have been courting her several months, but the happy result was only reached last Monday evening.

Older affections are only warmer and deeper because of this new love. Joyfully yours,

CHARLES W. ELIOT

This announcement was crossed in the mail by a letter from Lyman, who had already heard of the engagement from some one else, and who, in the midst of his felicitations and good wishes, breathed a sigh over the dispensation that turns romantic youths into practical men and tempers their blood. In reply Eliot wrote again:

CAMBRIDGE, *July* 13, 1877

DEAR THEODORE, — I have shared your notions about second marriages, and never supposed I should see a woman who would in the remotest degree suggest to my mind the idea of marrying again. But I have seen a woman whose mere aspect, voice and manner attracted me strongly when I was a stranger to her, and on a little

acquaintance I fell in love with her as completely as I did with Ellen when I was twenty-four. The phenomenon was an absolute surprise to me. My "comfort," "official position," and "practical" sense had nothing whatever to do with the matter. It is "ideal," "romantic" if you please — at any rate, it is love and not an arrangement of any cool and sensible sort. As to second marriage in general, Arthur's remarks are to the point, particularly for all descendants of Theodore Lyman of Waltham and Samuel Eliot of Boston, *all* of whom owe their existence to second marriages. You are gravely mistaken in your notion that the new love displaces or in any way impairs older affections. Ellen has been constantly in my mind these last three months — not less but more than before — less sorrowfully, more joyously. The love of her, like the love of Mother, is part of me. Do you love your little Cora less because you have little Theodore to love? My memory does not "throw its images more feebly as time passes" — at least my memory of Father, Mother, Ellen, and two babies. When death breaks any sweet companionship, time may or may not make the loss more endurable. As long as Mother lived I bore Ellen's loss tolerably well by means of an incessant activity; but since Mother died, the loneliness has been greatly intensified and the sense of loss increased. Now comes this beautiful, new joy,— a happiness and blessing for Ellen's boys as well as for me, a delight to Ellen's mother, sister and brothers, as well as to my sisters.

Your note troubles me a bit, because it sounds sad and

sceptical, and speaks of weakened memory and tempered blood. I appeal to Mimi.

I was sorry you missed Grace yesterday. Try again next week. Affectionately yours,

CHARLES W. ELIOT

The "happy result" had been reached on Monday. An Overseers' meeting occurred on Wednesday. The College year had ended. Saturday evening the 14th, Eliot tore himself away for the first of a succession of short visits to the camp on Calf Island that, throughout the remainder of the summer, alternated with precipitate returns to Cambridge. A sheaf of letters that he wrote daily to Grace Hopkinson during the absences has been preserved, and some of them convey more truly than could any other description an impression of the way his summer days passed on the Sunshine. Parts of two of these letters follow.

OFF NORMAN'S WOE, *July* 15, 1877

DEAR GRACE, — The table is rather unstable, whence a certain crookedness and unevenness of handwriting, which does not correspond with anything in my sentiments toward you.... I picked up some bundles at the house and was driven by Cody to Central Wharf. The Sunshine was ready, and Robert, Charlie and Prof. D. shortly appeared.[1] It was almost calm, but with the tide

[1] The first wife's younger brother, Robert Peabody, then beginning to practice architecture in Boston; his eldest boy, eighteen years old; and Prof. Charles F. Dunbar.

and a faint air we floated about six miles away from the city and anchored under Long Island before dark in company with a considerable number of other vessels. The evening was perfectly delicious. Robert, Charlie and I felt quiet from fatigue, Dunbar from habit probably, so by half-past nine we all turned in. At four this morning I looked out and found a beautiful little breeze. The coasters about us were getting under way, and it seemed good to be off too before sunrise. So I called all hands except Dunbar, and at half-past four we were slipping out through Broad Sound with perhaps twenty other sail. Ever since, we have been gliding along in the mildest possible manner with two or three short intervals of calm. Charlie stocked the larder very well, and supper and breakfast were not uninteresting. Robert has just been urging that dinner had better be hurried up somewhat. The sun being hot on deck all hands have been below reading, with intervals of profound slumber by Robert and Dunbar. I can't manage to sleep as they can, but my waking thoughts are very restful. The difference between this Sunday and last is tremendous. I have read the last Nation and three of Hawthorne's Twice-told Tales, and I have spent an hour in fishing chips out of the centre-board-well with a long-handled spoon, an operation requiring patience and pertinacity. Most of my attention is however given to considering what you are doing and thinking, how you have slept and eaten, how you liked the rehearsal last evening, and the singing at Church this morning, and how you look. These imaginings are en-

tirely delightful because through them all runs one refrain — we love each other....

9 P.M. We are snugly at anchor under Fort Constitution in Portsmouth Harbor after a placid run of about fifty miles in sixteen hours. Robert leaves us at six to-morrow morning and we shall await Frank[1] here. The day has been just perfect, except that the breeze has been very light. How can we contrive such a refreshment and rest for you? It is what you need. There are some heavy clouds in the West. Perhaps they mean that there is to be a storm to-morrow, in which case Cambridge for me by express train. Already I feel that no day can be properly finished without telling you what has happened in it, and hearing your story in return. Letter-writing is a miserable substitute for direct speech, vision and touch, particularly when I cannot get an answer....

BATH, *September* 7, 1877

DEAR GRACE, — What a delight it is to write that! I only wish I could see the correlative expression. Since I mailed a postal card at Friendship we have been at no postoffice, so that I have two days to give account of. On Thursday we left Friendship about 7¾ A.M. with a strong S.W. breeze, and got a jolly sail of two hours to George's Harbor which is placed among the St. George Islands north of Monhegan. There we landed on Allen's Island, and had a beautiful walk in the fragrant woods. Returning to the boat about noon, we found that the wind had

[1] Francis G. Peabody.

increased to half a gale, and that the Sunshine was dragging her anchor. We got sail on her and beat up to another anchorage where two fishermen were lying. Here, however, the light anchor would not hold and we let go the second. Then she stopped and we dined serenely. That afternoon I meant to go to Monhegan; but the wind was too heavy and dead ahead; so we prudently stayed in harbor. I paid a visit to the single family on Brenner's Island (which was nearest us) and conversed for an hour with Mr. and Mrs. Tufts, Mr. and Mrs. Low, a spinster sister of Mrs. Low and two Miss Davises, the first five being from Rockport, Mass., and the last two from Allen's Island. The Tufts and Lows come for the fishing season only, to buy fish and sell such goods as fishermen use. They were decidedly good specimens of Yankees, and I enjoyed my call. I also visited a man who lives all by himself on the island and has for years. He was a strange-looking creature, evidently of a disposition which made it desirable for his kind that he should exile himself. But what a miserable life he has of it! Squalid, lonely, poor, and with years of declining strength to look forward to without any solace or support. He got his living by fishing and keeping hens. With the few neighbors he had he was on bad terms. As night came on, the wind seemed to increase. About a dozen fishing vessels took shelter in our harbor, and we saw many others scudding farther into the land. About midnight some rain fell and the S.W. wind ceased. Earlier I had seen lightning in the N.W. from which I augured a favorable shift of wind.

Sherman [the steward] and I met on deck at 1 A.M. and found a light northerly wind blowing. At 4.20 A.M. I turned out for the day. There was a beautiful norther, a partly clouded sky and every indication of a good day's run westward. Frank and I got water and milk at the house on Brenner's at 5 A.M. The family were roused by our coming. Mr. Low opened the door and said, "Good morning, if it is not too late," and seemed mortified to have been caught in bed at that hour. We had breakfast (that being a precaution against sea-sickness with persons who are sensitive) and by 6½ were under way with a smacking breeze. In six hours we ran fifty miles and at 12½ P.M. dropped anchor in Casco Bay at Great Chebeague Island. It was a superb sail, land and water equally beautiful, and many vessels constantly in sight....

It is safe to say that there were very few islands in the waters the Sunshine frequented on which Eliot did not land sooner or later, which he did not explore, and whose folk, whether seasonal visitors like "Mr. and Mrs. Tufts and Mr. and Mrs. Low" or all-year residents, he did not call upon and pump with questions. "The only thing about his questions that used to annoy me," said a member of the Harvard Faculty who was a neighbor at Mount Desert, "was that I sometimes felt he would be just as much interested in the answer of a carpenter or fisherman as in mine." But, why not? The testimony of experience is the stuff of thought. A given question being whether life proves itself to be worth living. "I have observed,"

remarked Eliot, "in two instances this summer that laboring people find that question utterly absurd. They haven't a doubt on the subject."

On October 30, 1877, Eliot and Miss Hopkinson were married in Mrs. Hopkinson's house in Cambridge, by the Reverend Francis G. Peabody.

The second Mrs. Eliot was all that the announcement to Lyman described her as being and more charming to look at than the accompanying picture shows, for she had a warm complexion and shining black hair. Morbidness of any sort would have been as foreign to her nature as to Eliot's own. In a different way, but to no less a degree than his first wife, she brought the gift of a cheerful presence into a room with her. Like many people of short stature, she held herself very straight. In time, perhaps partly by the operation of that process of approximation which works upon character and deportment, and even upon physical aspect when two people are constantly and happily in each other's company, she came to give the impression of a duodecimo companion to her husband's tall quarto volume of correctness and dignity. But if, as the President's wife, she did not unbend in every company and reserved her good wit and her mimicry for intimates, her husband enjoyed them all the more. In fact, her fun and her discreet mockings — he himself being freely used as their object — gave him a quite intense enjoyment. So long as they both lived, Eliot and she were seldom parted for more than a few hours.

A result of one such rare occasion, which happened during the summer of 1885, was a little series of daily letters written to Mrs. Eliot. Between the lines of unimportant jottings they breathe the outdoor serenity of a summer vacation and the inward disquietude of a man who could hardly bear to be left alone. "Tenderness and gentleness all the time are what make home life blessed, with the rock-bed of honesty, you sweet, and gentle, and upright little woman...." "What a work-a-day world it would be without you! You impart cheerfulness and accomplishments and a general grace into a life which would otherwise be grave and dull. Such are your lighter works for me. The larger do not bear writing about...." "There is a monstrous vacancy in this house...."

Naturally Eliot's marriage led to changes in his mode of life. The house on Quincy Street was altered and enlarged. To spend the summers in tents or in the cabin of the Sunshine could not be so satisfactory for him and Mrs. Eliot as it had been for him and his boys. That sort of summer had been devised for their benefit as much as for his own recreation, and they were getting to be old enough to continue camping and sailing without his constant supervision. In 1880, Charles, who had finished his Sophomore year in College, spent the summer making historical, botanical, and geographical explorations on Mount Desert Island with a band of friends whom he called the Champlain Society, and when his father returned from a trip to Europe, the boy advised him that if he wanted to build a summer house he could find

beautiful sites between Somes's Sound and Seal Harbor. There were as yet no summer cottages on that part of the Island. Eliot went over the ground and chose and bought about one hundred and twenty acres at a point where a little cove with a good anchorage was protected on the north by a point of high land, and on the east by Bear Island. The hillside above the cove had a southerly exposure. It consisted largely of fields from which hay was still cut in those days, but which were beginning, in spots, to surrender to the fragrant patches of spruces, birch trees, prostrate juniper, and blueberry bushes that have since then filled their places. A house was built during the following year on a spot which was about one hundred yards from the shore and fifty feet above the water, and which commanded a view of the channel between mainland and islands that is called the Western Way. There Eliot passed the greater part of every ensuing summer, except one, until he died. Charles F. Dunbar bought Bear Island and built himself a summer cottage thereon. The little cove became the home anchorage of the Sunshine. Sometimes the boys and their friends took her away for a cruise. (In 1882 the older boy graduated from College; the younger in 1884.) At others Eliot or they took her out on short excursions.

CHAPTER X

1876–1890

Eliot's libertarianism and tolerance — "What is a Liberal Education?" — Criticism of schools and colleges — Entrance requirements — Reform through conference and agreement — Theological education and morning prayers

THE story of the changes and innovations which Eliot's administration brought to the University has been suspended since the close of Chapter VIII, where it appeared that the first phase of his Presidency might be thought of as ending during the years 1876 to 1878. In taking that thread of the narrative up again, it will now be convenient to deal with the whole period of about thirteen years that ended in 1890.

It will conduce to clarity if matters are considered topically rather than chronologically, and it will also be better to select a few topics for reasonably full treatment than to attempt to touch upon everything. A college president easily becomes involved in a great variety of social movements and controversies, simply because the work of a university impinges upon or is influenced by the life of the community in an infinite number of ways. This is especially likely to happen to a president whose mind has an outward- and forward-looking habit.

If we were to attempt to follow Eliot into the variety

of reforms with which he began to associate himself in the eighties, digressions and explanations would become innumerable, and they would shortly cease to advance our purpose. For after all, it would be ever the same Eliot whose footsteps we were pursuing. Having observed him in a few situations and discovered the principles upon which he acted, we ought to be able to dispense with repetitions of the process.

It will appear that Eliot's social philosophy was typically utilitarian and libertarian. Professor Perry has remarked that his democracy was essentially a belief in liberty, and some one else has said that freedom was really his god. Perry quotes: "When the student of history reviews the great achievements of the human race, he comes to the conclusion that those achievements which have brought deliverance from some form of terror or oppression, or have been gains for some sort of freedom, have proved to be institutionally the most durable achievements, — one might almost say the only durable." [1] This, quite appropriately, is the concluding sentence of an address on the elective system. By way of freedom to pursue a natural bent lay, as he saw the educational problem, the only sure road to studies that quicken the mind and ripen character. "It is ominous, a presumption of crime, that this word education has so cold, so hopeless a sound," said Emerson. Eliot hoped that by setting pupil and teacher free education might

[1] R. B. Perry, article on C. W. E. in *Dict. of Am. Biog.* Also, Eliot in *Univ. Admin.*, 173; and Neilson, 1, 159.

escape in each generation, ever and ever again, from traditions that become formal and from formalism that becomes inert. Turning to the social requirements which education must meet, he frequently quoted another sentence of Emerson's — "Society can never prosper, but must always be bankrupt, until every man does that which he was created to do." An active sense of personal responsibility appeared to him to be both the justification and the safeguard of democratic society. How could that exist robustly unless people were helped to develop and employ their own aptitudes for the work of the world? Thus only through individual liberty could a true sense of personal responsibility be engendered.

Liberty and democracy, be it noted, were not identified in his thinking with equality. His conception of democracy was *la carrière ouverte aux talents.* "There is no such thing," said he, "as equality of gifts, or powers, or faculties, among either children or adults. On the contrary there is the utmost diversity; and education and all the experience of life increase these diversities.... The pretended democratic school with an inflexible programme is fighting not only against nature, but against the interests of democratic society." [1] On another occasion he proposed to substitute for the French Liberty, Equality, and Fraternity "an Anglo-Saxon motto — 'Freedom, Unity, Brotherhood.' Those three ideas go well together and express a lofty and practicable social aim.... Social unity

[1] "The Function of Education in Democratic Society" (1897). In *Educational Reform,* and Neilson, I, 97, 105.

is consistent with great social diversities." And again, "Civilization means infinite differentiation under liberty." [1]

A man's behavior toward those who differ from him affords the acid test of his liberalism. The exemplary generosity with which Eliot accommodated himself and his work to opposition and disagreement showed how genuinely he believed what John Stuart Mill, Herbert Spencer, and his own Unitarians preached. Tolerance was not necessarily to have been expected from him, for the habit of his thought was affirmative, and it may be doubted whether in the whole long course of his life he was ever in a mood to enjoy speculative discourse. His impulse was to assert and to do, and his very intense desire was to bring his ideas to practical fruition. Thus his opinions formulated themselves dogmatically, not as hypotheses. The manner of such a man frequently becomes arbitrary when he reaches a position of power. If Eliot was never dictatorial, the fact proved his faith that differences are not only inevitable but salutary. He was sure that the world had better be so ordered as to give them free play.

What is more, conflict was not in itself distasteful to him. In fact one suspects that he keenly enjoyed a scheme of things that called for struggles between equals, and that life would have seemed tame and inferior to him if he could have attained his purposes by fiat. It was cer-

[1] See "Equality in a Republic" (1890), in *American Contributions to Civilization*, and in Neilson, II, 745, 751–52.

tainly the case that when a man disagreed or opposed squarely and openly, Eliot respected him and liked him the better.

"As a young man," said Eliot, speaking in 1903, "I found the writings of Emerson unattractive, and not seldom unintelligible. I was concerned with physical science, and with routine teaching and discipline; and Emerson's thinking seemed to me speculative and visionary. In regard to religious belief, I was brought up in the old-fashioned Unitarian conservatism of Boston, which was rudely shocked by Emerson's excursions beyond its well-fenced precincts. But when I had got at what proved to be my lifework for education, I discovered in Emerson's poems and essays all the fundamental motives and principles of my own hourly struggle against educational routine and tradition, and against the prevailing notions of discipline for the young...."[1]

There was also another writer to whom he owed a debt and to whom he paid acknowledgments on appropriate occasions. Herbert Spencer's essays on "Education, Intellectual, Moral, and Physical," had made their first appearance in British journals between 1854 and 1859 and had been republished in book form in 1861. That was just when Eliot was trying to make scientific studies worth while to his students by organizing volunteer surveying parties and devising methods of giving instruction in the laboratory. He did not go all the way with Spencer and agree that science should be the universal

[1] Neilson, II, 537.

staple of education in childhood, but he found much else in the essays that reënforced conclusions he was disposed to draw from his own experience as a pupil and teacher. That Spencer helped him to clarify and formulate his ideas is not to be doubted. In fact, it seems probable that some of Spencer's doctrines became embedded in his thinking before he found in Emerson's writings a more complete and more sympathetic expression of what he felt impelled to believe. He could read in Spencer a vigorous challenge to the then well-nigh universal supposition that teaching must be authoritative and to the common practice of instructing by the simple process of telling children what they ought to see, believe, and utter. In teaching science himself, he had quarreled with those current assumptions at the outset, and had tried to invent ways of teaching inductively instead of following the usual method of treating the abstract as preliminary to the concrete. Again, his assent was immediately given to Spencer's doctrine that it is the true function of parents and teachers to see that young people habitually experience the normal consequences of their conduct without substituting arbitrary penalties for natural ones and without supplying much artificial protection. Spencer attacked the dreary old supposition that it was impossible to make school work fascinating, or life work either, and urged that it ought to be made pleasurable and interesting. He also devoted an essay to physical education, recommending games and natural play, and urged the importance of teaching the care of the body and the laws of

health. He dwelt, too, upon the fact that in their early years children acquire a vast amount of information exclusively through the incessant use of their senses, and he made it a cardinal pedagogical principle, applicable to school work and college work alike, that pupils should get a large part of their new knowledge by the careful use of their own powers of observation. He exhorted teachers to teach children to draw, and to use pen and brush. Eliot's articles on "The New Education" in the "Atlantic" showed that these views had become his own.[1] For some years after the publication of the "Atlantic" articles his time had been fully occupied by Harvard's affairs; but it was inevitable that sooner or later he should renew his effort to secure recognition among schools for principles which were no less applicable to their work than to that of the colleges.

When the student of Eliot's record examines almost any piece of work that he undertook, incidental confirmation of what has just been said will appear. In this and the next chapter, four subjects which occupied him more or less constantly during the later seventies and the eighties will be considered. Each of them possesses an interest of its own. The first will show what were Eliot's ideas about the reform of educational methods and schools. Next, it will be in order to note how he seized upon the entrance examinations as a lever to raise the

[1] The foregoing sentences largely follow or paraphrase language which Eliot used in a little "Introduction" that he wrote in 1910 for a volume of Spencer's *Essays on Education* in Everyman's Library (Dent and Company, 1911).

schools. His views about theological education and certain facts about changes that were made in the conduct of religious services at the College will then call for mention. And, fourth, the development of the Graduate Department and Eliot's relation to it will be considered.

In February, 1884, Eliot delivered an address at Johns Hopkins which he published later under the title: "What is a Liberal Education?" [1] Nothing of his that had been printed since he wrote the papers called "The New Education" for the "Atlantic" in 1868 gives so clear a single picture of what he was contending for in colleges and schools. It was a painstaking, skillful, and ample declaration, and incidentally it provides excellent testimony concerning the conditions that then prevailed. Into it he condensed the gist of what he said more elaborately or in fragmentary fashion on countless other occasions during the eighties. A careful examination of it will accordingly prove to be a saving of time as well as a clarification of the record.

He began by inviting his hearers to think of the schools, upon whose work that of the colleges is conditioned, as well as of the colleges, and explained his purpose thus:

"The course of study which terminates in the degree of Bachelor of Arts ordinarily covers from seven to ten years, of which four are spent in college and three to six at school; and this long course is, for my present purpose, to be considered as a whole. I wish to demonstrate, first,

[1] To be found in *Educational Reform*, and in Neilson.

that the number of school and college studies admissible with equal weight or rank for this highly valued degree needs to be much enlarged; secondly, that among admissible subjects a considerable range of choice should be allowed from an earlier age than that at which choice is now generally permitted; and, thirdly, that the existing order of studies should be changed in important respects."

Granting that such proposals were certain to repel persons who were accustomed to the existing order, he went on to expose the weakness of the underpinning upon which the conservative opposition more or less rested. By going into the origins of the classical-mathematical course, he sought to attack the appeal to tradition in the rear and to capture the historical precedents for his own argument. Mathematics, now vaguely thought of as an unchanging discipline that possessed "the venerable sanction of immemorial use," had lately become a new subject. When Whewell, champion of moral philosophy and natural science in Cambridge University, wrote his essay "Of a Liberal Education" (1845), he had argued that the modern analytical mathematics "can in no way answer" as "a permanent study by which the reason of man is to be educated," and, if employed, "will not only be worthless, but highly prejudicial to men's minds." When Latin became one of the staples of a liberal education, it had been thought of not as a dead language and for its disciplinary value, but as the common speech of all scholars both lay and clerical. Such had been its employment until within a century. Greek, after its revival

in Western Europe, had knocked at the doors of Paris and Oxford for a hundred years before it gained admission to the rank of a regular constituent in the academic curricula, and the same arguments had then been made against it that were now being made against the modern languages. Going back a step farther, he pointed out that before the classical-mathematical education acquired complete prestige, it had waged two centuries of warfare with the scholastic metaphysics and theology that had been the main staple of a liberal education for generations. The displacement "was accomplished only after the same sort of tedious struggle by which the new knowledges of the eighteenth and nineteenth centuries are now winning their way to academic recognition." More remotely still, the theological education of the scholastic age had itself, after a protracted struggle and after theology became the only subject that could be studied systematically, displaced a still earlier and very different list of liberal studies. So history teaches not only that traditional modes in education persist with obstinacy, but that the claims of new literatures and sciences have to be urged with boldness.

Passing then to the new, he proposed first that the English language and literature should be accorded equal academic rank with any other. The subject still occupied a subordinate place in the schools, "and in many schools no place at all." The slight requirements in English which some colleges had recently prescribed for admission were demonstrating "the woeful ignorance of their

own language and literature which prevails among the picked youth of the country." Harvard had been trying, for ten years, to induce the preparatory schools to give more attention to English; but its efforts had availed so little that most of the money it was spending on English courses in the College was still being spent upon elementary work, and it was still offering less than half as much instruction of proper university grade in English as in either Latin or Greek.

Next he claimed that French and German ought to enjoy a position of academic equality with the classics and mathematics; for, said he — "I cannot state too strongly the indispensableness of both French and German to the American or English student. Without these languages he will be much worse off in respect to communicating with his contemporaries than was the student of the seventeenth century who could read and speak Latin; for through Latin the student of the year 1684 could put himself into direct communication with all contemporary learning."

In the matter-of-fact manner that often irritated his neighbors, he pointed to one of them as a reprehensible example. "I will describe the condition of instruction in French and German at Yale College, an institution, I need not say, which holds a leading position among American colleges. No knowledge of either French or German is required for admission to Yale College, and no instruction is provided in either language before the beginning of the Junior year. In that year German must be

and French may be studied, each four hours a week; in the Senior year either language may be studied four hours a week. In other words, Yale College does not suggest that the preparatory schools ought to teach either French or German, does not give its students the opportunity of acquiring these languages in season to use them in other studies, and does not offer them any adequate opportunity of becoming acquainted with the literature of either language before they take the bachelor's degree. Could we have stronger evidence than this of the degraded condition of French and German in the mass of our schools and colleges?"

Next came history. "One would naturally suppose that the history of the United States and England, at least, would hold an important place in the programs of American school and colleges, and that no subject would occupy a more dignified position in the best colleges and universities than history in respect to the number and rank of its teachers. The facts do not accord with this natural supposition. The great majority of American colleges (there are nearly four hundred of them) make no requirements in history for admission, and have no teacher of history whatever. Lest it be imagined that this can be true only of inferior colleges, I will mention that in so old and well-established a college as Dartmouth there is no teacher of history, whether professor, tutor, or temporary instructor; while in so excellent an institution as Princeton there is only one professor of history against three of Greek, and this single professor includes political

science with history in his teaching.... This humiliated condition of history is only made the more conspicuous by the old practice, which still obtains at some colleges (Harvard College, for instance), of demanding from all candidates for admission a small amount of Greek and Roman history — as much as a clever boy could commit to memory in three or four days. One hardly knows which most to wonder at in this requirement, the selection of topic or the minuteness of the amount. Is it not plain that the great subject of history holds no proper place in American education?"

He then went on to put in a plea for what he called "political economy or public economics": "When we consider how formidable are the industrial, social, and political problems with which the next generations must grapple — when we observe how inequalities of condition increase, notwithstanding the general acceptance of theories of equality; how population irresistibly tends to huge agglomerations, in spite of demonstrations that such agglomerations are physically and morally unhealthy; how the universal thirst for the enjoyments of life grows hotter and hotter, and is not assuaged; how the relations of government to society become constantly more and more complicated, while the governing capacity of men does not seem to increase proportionally; and how free institutions commit to masses of men the determination of public policy in regard to economic problems of immense difficulty, such as the problems concerning tariffs, banking, currency, the domestic carrying trade, foreign

commerce, and the incidence of taxes, — we can hardly fail to appreciate the importance of offering to large numbers of American students ample facilities for learning all that is known of economic science." In this connection Columbia College and Brown University were added to the list of sorry exhibits, and Eliot exclaimed, "In view of this comparative neglect of a subject all-important to our own generation and to those which are to follow, one is tempted to join in the impatient cry, Are our young men being educated for the work of the twentieth century or of the seventeenth?"

His list closed with natural science, and there he found a word to say about an aspect of the matter upon which the advocates of the classical curriculum were fond of throwing an emphasis: that is, about the disciplinary or formative value of the studies required. "All the subjects which the sixteenth century decided were liberal, and all the subjects which I have heretofore discussed, are studied in books; but natural science is to be studied not in books but in things.... The student of natural science scrutinizes, touches, weighs, measures, analyzes, dissects, and watches things. By these exercises his powers of observation and judgment are trained, and he acquires the precious habit of observing the appearances, transformations, and processes of nature. Like the hunter and the artist, he has open eyes and an educated judgment in seeing. He is at home in some large tract of nature's domain. Finally, he acquires the scientific method of study in the field, where that method was originally per-

fected. In our day, the spirit in which a true scholar will study Indian arrow-heads, cuneiform inscriptions, or reptile tracts in sandstone, is one and the same, although these objects belong respectively to three separate sciences — archæology, philology, and paleontology.... I maintain that the young science which has already given to all sciences a new and better spirit and method, and to civilization new powers and resources of infinite range, deserves to be admitted with all possible honors to the circle of the liberal arts; and that a study fitted to train noble faculties, which are not trained by the studies now chiefly pursued in youth, ought to be admitted on terms of perfect equality to the academic curriculum."

The "men of the fifteenth century," he added, "took the best intellectual and moral materials existing in their day,... and made of them the substance of the education which they called liberal." In that they had been wise. Each new age must do the same.

If Eliot's list of liberal studies were to be accepted, it would clearly be impossible to prescribe it to the individual student in its totality. The educational process would no longer be conceivable as a particular sequence of disciplines; the curriculum must be larded with options; and the problems of method which the word "elective" betokened must be faced. So Eliot went on to point out that the still prevailing system of required studies did not even give the student a mastery of Latin and Greek, although it did prevent any other subject from being begun early enough or carried far enough to

yield up its nourishment. It led to conditions under which metaphysics were taught to students of college age from a single textbook, physics from a short course of lectures, and political economy from a little manual composed by a second-rate author. Let the student have a chance, he begged, to be thorough in something. To that end let him begin to exercise an option at an earlier age.

Thus he came to his last and most debatable question; the desirable order of studies at school and in college. Boyhood being the best time to learn languages, the schools should provide instruction in French and German as well as in Latin and Greek. But any three languages that might be chosen ought to satisfy the college entrance requirements. The schools should also teach "English, the elements of mathematics, the elements of some natural science properly taught, and the history of England and the United States" instead of leaving it to the colleges to begin them. As to the sequence of these studies within the school, Eliot referred his answer to a principle which he considered fundamental. If there is to be a priority among the languages, begin with the one that is easiest, and take up the hardest last. "In education, as in other things, I am a firm believer in the principle of expending the least force which will accomplish the object in view. If a language is to be learned, I would teach it in the easiest known method, and at the age when it can be easiest learned." If, in a given school, German could be learned under an inspiring teacher, Latin only under a poor one, Eliot would probably have advised a boy to

begin with German. The theory that hardness should be sought and imposed upon boys by means of studies whose chief use is disciplinary had seemed wrong to him while he was an undergraduate, and now he regarded it as no better than an evil superstition. "To my mind the only justification of any kind of discipline, training, or drill is attainment of the appropriate end of that discipline. It is a waste for society, and an outrage upon the individual, to make a boy spend the years when he is most teachable in a discipline the end of which he can never reach, when he might have spent them in a different discipline, which would have been rewarded by achievement. Herein lies the fundamental reason for options among school as well as college studies, all of which are liberal. A mental discipline which takes no account of differences of capacity and taste is not well directed. It follows that there must be variety in education instead of uniform prescription." This, be it observed, was not the same as saying that a boy may dodge whatever is disagreeable, or that he should play if he would rather not work at all. To attribute such theories to Eliot, who never held them and who was an unremitting self-disciplinarian, is absurd; and yet, he has often been charged with giving them the sanction of his adherence. The art of economizing effort is one of the most precious of the arts of living and one of the most difficult to practice. What he insisted upon was that it ought to be practiced in education as constantly as everywhere else.

Before he closed, Eliot spoke of what the reader will ere

now have recognized as another point upon which he deemed it necessary to insist often — education must be constantly adjusted to the spirit and interest of the age if it is not to fall into contempt. On no other principle can a given society attain or maintain a high cultural level. In America most of the men who were engaged in the intellectual professions — law, medicine, journalism, science, public service, industrial leadership — were not, he observed, liberally educated. This might be due in part to the pioneer condition of American society, but he thought it was also attributable to the antiquated state of the school and college curricula. "When institutions of learning cut themselves off from the sympathy and support of large numbers of men whose lives are intellectual, by refusing to recognize as liberal arts and disciplinary studies languages, literatures, and sciences which seem to these men as important as any which the institutions cultivate, they inflict a gratuitous injury both on themselves and on the country which they should serve...." Then, accepting the full implications of his argument, he concluded that "it is not the proper business of universities to force subjects of study, or particular kinds of mental discipline, upon unwilling generations; and they cannot prudently undertake that function, especially in a country where they have no support from an established church, or from an aristocratic organization of society, and where it would be so easy for the generations, if repelled, to pass the universities by." Here, some readers may say, Eliot ignored a distinction that is tenable and

that, if tenable, is important. He had begun by talking about the course which led through school and college to the Bachelor of Arts degree. Without warning he now passed to "the special business of universities." But may not the business of the college be different from that of the university? May not a special kind of mental discipline be required for a particular degree? The question leads to nice arguments; but we should be missing the main point if we embarked upon them. Eliot was speaking in 1884. Universities in America were not yet much more than colleges. Many institutions that assumed to style themselves universities were nothing but colleges. In employing the name that was in current use, he was not shifting the ground of his argument. He would have been willing to substitute the word "colleges."

The general tenor of the arguments that Eliot contributed to Faculty discussions, to meetings of school teachers, and to the early conferences of representatives of the New England colleges can be inferred sufficiently from the Johns Hopkins address. Many obstacles stood in the way of even gradual reforms.

In the first place, college faculties were, as it is notorious that they commonly are, strongholds of conservatism. One could not make the modern languages and history, for example, count for more in the admission requirements without either making it harder for boys to reach college, or, by implication, making the classics count for less. Both alternatives were sincerely opposed in every

college faculty and in many schools. Then, too, if one member of a group of colleges such as the endowed institutions of the Northeast got out of line, the tendency among the schools would be to ignore its peculiar standards and fit their boys for admission to the others. But the colleges had not been in the habit of acting in concert even in the cause of general improvement. Each made fetishes of its own traditional idiosyncrasies, clung to them, and was inclined to play a lone hand in the game, or, more accurately, in the competitive business of attracting students and attaching satellite schools.

Between the grammar schools and colleges there were private schools that went each its own way, and schools supported by taxation over which town or city or county authorities exercised control according to an indescribable diversity of standards. In many, the boards or committees in which control was nominally vested left everything to the discretion of the teachers. Some were of the Latin school type, others were high schools which could not prepare boys to meet all the classical requirements for admission to the colleges of liberal arts. The colleges of the East were on the whole completely independent of control by the State, and the States, as distinguished from the municipalities, had not tried to regulate secondary education in a thoroughgoing manner. America had nothing comparable to the ministries of public instruction in France and Germany. In short, there was neither a school system organized to bring ranks of boys along to a generally recognized graduation grade, nor a collegiate

system committed to the enforcement of standardized entrance requirements. Only a small minority of American boys found a path of orderly progression from grammar school to college ready prepared for them.

Order and standards had therefore to be evolved mainly by processes of conference, suggestion, argument, discussion, and, lastly, agreement. But there was a limited possibility of acting as well as talking. A college like Harvard might put pressure on the secondary schools through its power to define the requirements for admission to its own Freshman class. Indirectly, it might also influence other colleges. The definition of college-entrance requirements thus became a point of what might be called high tactical value in the campaign for school reform. At what stage would the colleges decide that their work must begin? We may now think it unfortunate that the college-entrance examination should have been allowed so much influence in determining the structure of the whole educational system; but that is a reflection after the event. The negotiations that went on ceaselessly over and around the entrance requirements during the three last decades of the nineteenth century were an effort to achieve order and to agree upon standards and were broadly constructive in their purpose.

To Eliot, who believed whole-heartedly in the democratic method of expressing differences of opinion freely and in getting ahead by compromise and agreement, this method of ordering and standardizing seemed as admirable as it was necessary. He would have said, modestly,

that he wanted merely to help draw attention to some of the needs of the time. Far-looking proposals, candid criticisms, and patience in council were what he was content to believe that any particular reformer might always proffer. The sum of his own contribution of these may justly be said to have been quite unmatched. That was, in truth, all he ever claimed that he was doing. If his "drawings of attention" were often provocative, that was one reason why they made an impression.

American history, English literature, and science have at last become staples of our school curricula. Language studies have been modified in the direction of Eliot's proposals. Teaching now tries not to be authoritative, pays more attention to the pupil's faculties of observation and decision, and tries harder to enlist his initiative. Much of what Eliot used to say therefore seems trite now. The reforms of the last half-century were, of course, not of Eliot's sole making any more than the immense tide of universal transmutation was of his raising. But on point after point his voice was one of the first and one of the clearest that urged and prophesied change. His leadership in educational movements of fifty to twenty years ago rested, not on the peculiar originality of his ideas, for they were not new in the world, but on the fact that he was usually ten to twenty years in advance of the majority. For example, he saw, at the beginning of his administration, that intelligent and ambitious boys whose parents had sent them to the ordinary high schools were being cut off from the opportunity to go to college by the rule which

said that no boy could enter without passing examinations in both Latin and Greek. But it took a long time to persuade his colleagues to alter the Harvard rules. In 1883 he wrote to Brush (December 9): "The College Faculty is discussing a plan for admitting to College with only one dead language, and the chances are in favor of its adoption. Nine years ago I could not even get the question put to vote in the Faculty." As a matter of fact, it was two years more before the Faculty and both Governing Boards concurred to make Greek optional among the entrance requirements. Then, at last, as Eliot explained in his Report for 1885–86, a preparatory school which was not a typical classical school might teach "English, French, or German, mathematics, chemistry, and physics, with the elements of Latin and of the history of England and the United States, and therewith secure the admission of its pupils to Harvard College."

Similarly in the matter of agreement among the different colleges to reduce the troublesome diversity of requirements that were being held over the preparatory schools, full three years of debate and conference were needed to induce Harvard, Yale, Brown, Dartmouth, Williams, Trinity, Amherst, Wesleyan, Tufts, and Boston University to agree to make their entrance requirements alike on paper at least. The result, as Eliot announced with satisfaction, was greatly to facilitate the work of any school which had to prepare boys for several of these colleges.[1]

[1] *Ann. Rep.*, 1878–79, 12, and 1881–82, 14.

The College Entrance Examination Board became a reality in 1900. It had been suggested first by Eliot in 1877. During more than thirty-two years, while the recommendation slowly won friends, he pressed it patiently on every suitable occasion.

Eliot's conception of the rôle that a non-sectarian theological school should play was expressed succinctly in the course of a plea for more endowment; issued in 1878: "... It is for those who believe that theology, ethics, biblical criticism, history, and homiletics should be taught without sectarian bias, who have confidence in liberty of thought, and who hold that the various philosophical theories and religious beliefs should be studied before, and not after, any of them are embraced, to say whether a School which for sixty years has represented and maintained these principles shall be adequately supported. The fact that most members of the clerical profession are committed to a particular creed, or form of church organization in early youth, or even in boyhood, long before they have attained knowledge and maturity enough to make an intelligent choice of creed or church, diminishes to an incalculable degree the influence of the profession in the modern world; for the modern world respects only the scientific method, which admits of no settled convictions except those which rest upon thorough previous investigation. By the side of the numerous theological schools which are avowedly devoted to the interests of the several denominations, and which are recruited

in large part by the offer of the bounties of Education Societies to boys in academies and young men in colleges, let at least one University school of theology be suitably supported, where young men may study theology and the kindred subjects with the same freedom of spirit with which they study law in a Law School, or medicine in a Medical School, and with as little intention or opportunity of committing themselves prematurely to any particular set of opinions or practices." [1]

Dr. W. W. Fenn.[2] has recently cited it as an example of Eliot's courage that at the very moment when money was being raised for the School, chiefly among Unitarians, he declared publicly that the function of the School should no longer be that of feeder to the pulpit of one denomination. This comment is just, for all the money for the School came from Unitarians, and Eliot's declaration did alienate the intensely sectarian element among them. But the reasons for being explicit seemed compelling to him. In 1816, when the Divinity School began as a department, it had been announced that its purpose was to "give every encouragement to the serious, impartial, and unbiased investigation of Christian truth." In Eliot's view, this was a truly Unitarian approach to theology. Even more, it was a noble advance toward the liberalism in which he ardently believed, and he was proud that it had been made. The statutes of the University, as revised during the first years of his administration, con-

[1] *Ann. Rep.*, 1877–78, 36–37.

[2] In Morison's *Development of Harvard University*, 465.

tained but one clause concerning the Divinity School — "No assent to the peculiar doctrines or practices of any denomination of Christians is required of instructors or students in the Divinity School." At a time when money was being sought and people might want to give it with conditions attached, he would have been sure to emphasize this cardinal principle of the School's constitution, and it would not have occurred to him to put the principle in jeopardy for the sake of raising money.[1]

Eliot's belief in the congregational type of church organization was almost instinctive, for it was what he had grown up with and it fitted into his conceptions about the virtue of democratic forms of government. For Unitarianism, his special preference was unshakable. Whoever knew him understood that he was temperamentally a non-conformist, and no one who, on a certain occasion, heard him quote Emerson's "Whoso would be a man, must be a non-conformist"[2] could doubt it. Catholicism, the Church of England, and the American Episcopal Church excited in him an almost instinctive antipathy. So his constant and active encouragement of religious worship according to other creeds than his own was a

[1] As this goes to press, a letter has come to light addressed to Arthur T. Lyman, March 6, 1879, in which Eliot said: "Fifty-three years ago the understanding [concerning the Divinity School] was perfect — no tests whatever. I am anxious that precisely the same principle should be enforced now. That is firm ground. Opinions change from generation to generation; but as long as that principle is faithfully observed, the Divinity School must be a liberal and liberalizing institution. No other Protestant sect can take that ground without practically abandoning its position, and merging itself with what we now call Unitarianism. No other sect does take that ground."

[2] Emerson in the essay on "Self-Reliance."

proof of his tolerance, not an indication of indifference about question of belief. A letter to the late Bishop Doane of the Episcopal Church contains an exact statement of his position.[1]

To Bishop Doane

July 31, 1884

... May I say a word about "unhappy divisions," from my point of view as a member of a very small sect and an official who is brought into contact with a great variety of people worthy and unworthy, young and old, belonging to many denominations? Divisions in religion seem to me, not *unhappy*, but natural, inevitable and desirable. What is *lamentable* is bitterness or strife over these natural divisions. The same food and the same exercises are not equally good for all bodies. In the matter of food, different climates, habits, occupations, and different individual peculiarities have to be taken into account, and we do not consider differences of opinion and practice about diet to be unhappy. On the contrary hospitality recognizes these differences and provides a various table.

In things intellectual we observe that diversities of gift, and an extreme division of labor are, on the whole, means of progress for the race.

In things spiritual, I believe that diversity of faculty, taste and mode of activity is equally natural, and that the increasing divergencies in religious opinions and observ-

[1] I call this a letter; but to be more accurate, what is here transcribed is a draft, so much revised that it looks as if it had been kept in lieu of a clean copy that had been mailed.

ances result from an increasing respect for the spiritual rights of the individual, a respect which lies at the foundation of modern civilization. The all important thing is that men should worship God and not live without lifting their eyes to the hills. Diversities of organization form and creed help rather than hinder this main object. The foundation of real religious unity seems to me to be identity of aim, — the cultivation of love to God and man, — not identity of beliefs, rites, sacraments or organizations which are but means.

Nevertheless, members of other sects than the Unitarian thought Eliot disingenuous when he talked about a non-denominational Divinity School at Harvard. Its professors were Unitarians; it was conducted by a University in which the traditions and preponderant influences were still Unitarian; so its non-sectarian pretension was merely a manner of raising Unitarianism to the *n*th power. On this point no effective answer could be made except by the aid of the slowly accumulating evidence of the event.

The School did, little by little and as opportunities to make new appointments were offered to the Corporation, add Baptists, Congregationalists, Episcopalians, and other non-Unitarians to its Faculty, did draw men from different sects into its student body, and did graduate them into the pulpits of a variety of denominations. Gradually it became "an institution for the scientific cultivation of the vast body of various learning which is

grouped around theology" [1] as well as a training school for the Protestant ministry.

When Dr. Andrew P. Peabody resigned as Preacher to the College and Plummer Professor of Christian Morals in 1881, Eliot tried to induce Phillips Brooks to accept the double position. It now seems natural enough to have sought the one man who could bring an established reputation to the institution and the greatest eloquence and ability to the discharge of his duties, and, in seeking him, to disregard denominational differences. But when news of the call became public, it produced a widespread and intense excitement. "There was much speculation as to its import...; in the minds of some, the consideration was foremost that the University was breaking with the traditions of its history in handing over the responsibility of the religious training of its students to an Episcopal clergyman, a representative of the Church of England in America....Brooks became the object of a controversy, almost a battle." Was Harvard discarding its Unitarianism? Was Brooks intending to abandon the Episcopal Church and had the Corporation been privately advised of his unpublished intentions? Such rumors were flying about that Brooks went to Eliot and asked if there was any misapprehension about his Trinitarianism. The newspapers were full of letters for and against; the students held a mass meeting to urge Brooks to accept; a High-Church clergyman wrote him from Pennsylvania: "Your election to succeed Dr. Peabody at Harvard is the most

[1] C. F. Dunbar in *Harv. Grad. Mag.*, II, 464.

stunning fact in regard to religious changes that our country has seen since the Cutler and Johnson tempest in the good old colony times." Brooks ended by declining to let himself be withdrawn from the work he was already doing; but the incident signalized the end of the practice of having one University preacher and that one a Unitarian.[1] For a few years services in the College Chapel were conducted by different men of different denominations, usually officers of the University who were invited to take charge without regular appointment. Then, in 1886 a Board of Preachers was established to divide up the work among themselves regularly. The first Board of six was composed of two Unitarians, one Episcopalian (Phillips Brooks), one Baptist, and two Congregationalists. And thereafter the Board, as made up afresh from year to year, was composed largely of men who had no other connection with Harvard and who were always recruited from different denominations. In addition, other men who were not members of the Board of Preachers, Roman Catholics among them, were invited to preach in the College Chapel.

Meanwhile Eliot continued to press his arguments about the right sort of training for the ministry. "... It is important to observe that, as regards the appropriateness to university instruction of the subjects ordinarily, though inaccurately, designated as theological, the grounds for any difference of opinion whatever among men of learning are very narrow. These subjects are by

[1] See A. V. G. Allen, *Life of Phillips Brooks*, II, 277–304.

common consent as liberal and as unsectarian as chemistry, philosophy, or history, with the exception of Christian dogmatic theology, which is quantitatively a very small proportion of their enormous mass. Thus, Hebrew, Arabic, and other Oriental languages, ecclesiastical history, the literature and criticism of the New Testament, ethics, natural theology, philosophy in its relation to religion, ethnic religions, and the history of religions are all, when properly defined and treated, matters of pure science, which, in every university worthy of the name, should be studied not only by persons who expect to make a professional use of them, but also by young men, graduates or undergraduates, who pursue them as elements of liberal culture. The expediency of grouping the professorships which deal with these subjects into a separate organization called a Divinity School may, perhaps, be reasonably questioned, either now or hereafter, as it has been repeatedly in the past; but it cannot be doubted that the subjects themselves possess an exalted and enduring intellectual interest which makes them necessary parts of a comprehensive scheme of university instruction... The spirit or atmosphere of a school conducted on these principles can never be satisfactory to sects which believe that the acceptance of certain dogmas is of vital importance; but to these very sects a university which includes a theological department conducted on these principles may well be more acceptable than one which banishes theology completely from its precincts." [1]

[1] *Ann. Rep.*, 1878–79, 22, 25.

The intellectualism of this seemed more remarkable to some readers than its justice. Eliot was at pains to state that he did not deny the value to the world of "devout uninstructed exhorters," and also pointed out explicitly that he was dealing only with the intellectual furnishing of a minister and not with his inspiration. But it made no difference. To the mystical-minded and to persons who thought habitually in the terms of some particular interpretation of an all-sufficing revelation, the argument was unsympathetic and seemed subversive. It sounded like a proposal to educate ministers on a diet of rational negations. John Chipman Gray said that at one time in the seventies "the School was composed of three skeptics, three mystics, and three dyspeptics." [1] They were not, one surmises, destined to swell the ranks of devout, uninstructed exhorters.

The traditions of the theological schools had to be attacked on another score as well. Eliot wanted to stop the practice of granting unearned scholarships and unearned exemptions from the payment of fees. His arguments on this head had no theological implication, but they were, like others of his contentions, couched in language that was uncompromising. He spoke of the "mendicant element" in the seminaries and of "young men of small mental capacity and flaccid physical or moral fiber" [2] whom they were graduating into the parishes.

"The clerical profession, in the Protestant as well as in

[1] Quoted by E. H. Cotton, *Life of C. W. Eliot*, 161.

[2] *Educational Reform*, 76.

the Romish church, is mainly recruited from the class of persons who accept charitable aid in getting their education. The principal Protestant denominations in the United States maintain 'Education Societies' which give young men aid in getting through college and the theological seminary, on condition that they devote their lives to the Christian ministry. The theological seminaries practically announce that their students are supplied gratuitously with instruction, rooms, books, fuel, and lights, and in many cases with board also. The conditions of receiving this gratuitous living and education (in addition to evidences of need) are: first, a certificate that the applicant is a member of a church, and of 'hopeful piety,' or that he is of moral and religious character, or that he is 'called of God to the work of the ministry'; and, secondly, a declaration by the applicant that he has a serious purpose of devoting his life to the Christian ministry. The latter declaration is taken by some Education Societies from boys no more than sixteen years of age. The condition of a young man who has received money upon such a declaration, perhaps for several years of boyhood, and then finds his purpose changed or changing, is certainly very pitiable. He has no means of repaying the advances he has received; very probably he cannot finish without such aid an education well begun; and yet he cannot with sincerity and honesty of mind fulfil the pledges given in his boyhood. He has been led into a very sore temptation. This general method of bringing up ministers is not peculiar to any sect or to any country, but

is common to all sects and to all Christian countries, and has been followed in some degree for many generations, although among the Protestant sects of the United States the method has been much amplified during the past forty years. . . ." [1]

In 1883, Eliot published a paper on "The Education of Ministers" in the "Princeton Review," in which he said: "These remarks imply that ministers, as a class, and as a necessary consequence of the ordinary manner of their education and induction into office, are peculiarly liable to be deficient in intellectual candor; and that is what I, in common with millions of thoughtful men, really think; and I think further that this belief on the part of multitudes of educated men, most of whom are silent on the subject, is a potent cause of the decline of the ministry during the past forty years." [2] Again: "No other profession is under such terrible stress of temptation to intellectual dishonesty as the clerical profession is."

He thought that the Protestant ministry would never be "on a thoroughly respectable footing in modern society" until what he called the friar or mendicant element was completely eliminated. "The Protestant minister is an organizer of charity, a promoter of friendly social relations, a family adviser and sympathizer, a public functionary for baptisms, marriages, and burials, a leader of social worship, and a public teacher who upholds the ideals of manners, conduct, and character. To treat him,

[1] *Ann. Rep.*, 1875–76, 14 *et seq.*

[2] *Educational Reform*, 71, 72.

young or old, as an object of charity is no more appropriate than to treat in that way the master of the high school, the family physician, or the judge of probate." [1]

By 1882 he could boast, speaking in general terms, that in the Harvard Divinity School "the administration of the beneficiary funds has been placed, as in other departments of the University, upon the basis of scholarship and promise as well as need." [2] The principle had been established and that was a victory. But this statement, although strictly true, painted the situation more favorably than it yet fully deserved. For so long as the funds for student-aid in the Divinity School exceeded what the best grade of applicants required, it was impossible to be truly exigent in voting the scholarships.

Tuition fees afforded another instance of undiscriminating charity in theological education. The Divinity School required a fee of fifty dollars in 1871, although all other departments of the University had already raised the fee to one hundred and fifty dollars or more. To bring the Divinity School up to the general level, it would only have been necessary for Eliot to persuade the School's Faculty and the Governing Boards to agree with him. But apparently that could not be done. The School, with Eliot as its titular head, went begging to the public for money in the seventies without first raising the tuition fee. To be sure, the students were so few in number that even

[1] *Ann. Rep.*, 1888–89, 19.

[2] See for an early and full discussion of scholarships, *Ann. Rep.*, 1877–78, 8–27.

if they had all paid larger fees the School would still have had to seek more money. But the principle that one must help one's self before asking help from others was none the less involved. That no change was made at such a time shows how obstinate was the charitable tradition. Eliot persisted too, however. He criticized the low tuition fee publicly in his Report for 1888–89 and again two years later. Still without result. At that late date he comforted himself by remarking that he knew of no theological school anywhere else in the country at which any tuition fee whatever was exacted.

It was not until 1897 that the Divinity School began to charge one hundred and fifty dollars for instruction, like every other department.

Since the College had adopted the elective system in considerable measure, compulsory attendance at morning prayers had seemed out of harmony with the spirit of the new policy. The students objected to it for various reasons, beginning with their own very human preference for lying abed, and ending with ingenious arguments about its being illegal to compel such of them as had passed their twenty-first birthday to go to church. Between 1873 and 1876 the Faculty of the College recommended to the Governing Boards four times that compulsory morning chapel should be abandoned.

A considerable though never definitely ascertained proportion of the graduates and parents thought as did the President of another college that "the abandonment of a

custom so salutary and so characteristic as well as time-honored, would be fraught with most serious consequences to the whole fabric of our civilization." [1] Morning chapel exercises for all were a two-hundred-year-old institution in the College. They were also customary in every other college. So the Corporation and Overseers, including Eliot and Phillips Brooks, had been unwilling to accept the recommendations of the students and Faculty. Eliot was apparently influenced partly by his own fondness for the morning service and partly by a fear of giving one more occasion to the critics of Harvard to accuse her of being revolutionary and fanatical in the promotion of so-called freedom.

In 1886, Professor Francis G. Peabody of the Divinity Faculty became Plummer Professor and proposed a complete program which looked to the formal organization of the Board of six preachers which has already been mentioned. Each of them was to be in residence at Wadsworth House during his term of service and to keep regular consultation hours for the students. The proposal included the substitution of voluntary for compulsory attendance at prayers and also certain improvements in the services in the College Chapel. This was not a proposal to retreat, but to adopt a forward-looking plan for religious guidance framed in the hope of developing "the present unsatisfactory ways into more living ones." [2] The preach-

[1] See A. V. G. Allen, *Life of Phillips Brooks*, II, 613–17.

[2] F. G. Peabody to Phillips Brooks. See Morison, *Development of Harvard University*, lii, and Introduction, § 3, *passim.*

ers agreed that they would rather address a small congregation that convened in a worshipful spirit than hold prayers for a mass of students who were policed into the Chapel in a rebellious mood, and the plan converted Phillips Brooks. He urged the Governing Boards to accept it *in toto*, including its proposal to abolish compulsory chapel. In such matters no man's advice commanded Eliot's respect as did Brooks's. And so he swung round too.

There has never been any disposition at Harvard to change the system that was thus adopted in 1887.

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